

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM S-3  
REGISTRATION STATEMENT**

*Under  
THE SECURITIES ACT OF 1933*

**Cassava Sciences, Inc.**

(Exact name of Registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**91-1911336**  
(I.R.S. Employer  
Identification Number)

**7801 N Capital of Texas Highway, Suite 260  
Austin, TX 78731  
(512) 501-2444**

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

**Remi Barbier**  
**President, Chief Executive Officer and Chairman of the Board of Directors**  
**Cassava Sciences, Inc.**  
**7801 N Capital of Texas Highway, Suite 260**  
**Austin, TX 78731**  
**(512) 501-2444**

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

*Copies to:*  
**Alfredo B. D. Silva, Esq.**  
**Morrison & Foerster LLP**  
**425 Market Street**  
**San Francisco, CA 94105**  
**(415) 268-7000**

**Approximate date of commencement of proposed sale to the public:** From time to time, after the effective date of this Registration Statement.

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

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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, 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 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, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☒ Emerging growth company ☐  
(Do not check if a smaller reporting company)

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

#### CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount To Be Registered (1)(2)	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price(1)(2)	Amount of Registration Fee
Common Stock, \$0.001 par value per share (3)	-	-	-	-
Preferred Stock, \$0.001 par value per share (3)	-	-	-	-
Depository Shares	-	-	-	-
Warrants (4)	-	-	-	-
Debt Securities	-	-	-	-
Total (5)	\$200,000,000 (5)	- (6)	\$200,000,000 (5)	\$25,960 (7)

- (1) There are being registered hereunder such indeterminate number of shares of common stock and preferred stock, such indeterminate number of depository shares, such indeterminate number of warrants to purchase common stock, preferred stock and/or debt securities, and such indeterminate principal amount of debt securities as may be sold by the registrant from time to time, which together shall have an aggregate initial offering price not to exceed \$200 million.
- (2) We have estimated the amount to be registered and the proposed maximum offering price solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended (the “Securities Act”). The amount and price are exclusive of accrued interest, if any, on the debt securities. The amount to be registered and proposed maximum aggregate offering price are not specified as to each class of security pursuant to General Instruction II.D. of Form S-3 under the Securities Act.
- (3) In addition to any securities that may be registered hereunder, we are also registering an indeterminate number of shares of common stock or preferred stock as may be issued upon conversion, exercise or exchange of the securities issued directly hereunder.
- (4) Includes warrants to purchase common stock, warrants to purchase preferred stock and warrants to purchase debt securities.

- (5) The securities registered hereunder may be sold separately, or as units with other securities registered hereby. The proposed maximum offering price per unit will be determined by us in connection with the issuance of the securities. In no event will the aggregate offering price of all securities issued from time to time pursuant to this Registration Statement exceed \$200 million or the equivalent thereof in one or more foreign currencies, foreign currency units or composite currencies.
- (6) We will determine the proposed maximum offering price per unit in connection with the issuance of the securities and it is not specified as to each class of security pursuant to General Instruction II.D. of Form S-3 under the Securities Act.
- (7) Calculated pursuant to Rule 457(o) under the Securities Act. Pursuant to Rule 457(p) under the Securities Act, the registrant is applying \$7,738 of the registration fee paid in connection with the Registration Statement on Form S-3 (File No. 333-217319) initially filed on April 14, 2017 and declared effective on July 31, 2017 (the "Prior Registration Statement") representing a portion of the total amount of the filing fee associated with the unsold securities registered under the Prior Registration Statement, to offset \$7,738 of the registration fee due hereunder.

**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 this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.**

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## STATEMENT PURSUANT TO RULE 429(b)

The registrant is filing a base prospectus in this registration statement pursuant to Rule 429 under the Securities Act in order to satisfy the requirements of the Securities Act and the rules and regulations thereunder for the offering, issuance and sale by the registrant of up to a maximum aggregate offering price of \$200,000,000 of the registrant's common stock, preferred stock, debt securities, warrants and/or units registered in the Prior Registration Statement. The base prospectus in this registration statement, which is a new registration statement, also constitutes a post-effective amendment to the Prior Registration Statement. Such post-effective amendment shall hereafter become effective concurrently with the effectiveness of this registration statement and in accordance with Section 8(c) of, and Rule 429 under, the Securities Act.

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## EXPLANATORY NOTE

This registration statement contains two prospectuses:

- a base prospectus which covers the offering, issuance and sale by the registrant of up to a maximum aggregate offering price of \$200,000,000 of the registrant's common stock, preferred stock, debt securities, warrants and/or units; and
- a sales agreement prospectus supplement covering the offering, issuance and sale by the registrant of up to a maximum aggregate offering price of \$100,000,000 of the registrant's common stock that may be issued and sold under a Sales Agreement dated March 27, 2020 with SVB Leerink LLC.

**The base prospectus immediately follows this explanatory note. The sales agreement prospectus supplement immediately follows the base prospectus. The common stock that may be offered, issued and sold by the registrant under the sales agreement prospectus supplement is included in the \$200,000,000 of securities that may be offered, issued and sold by the registrant under the base prospectus.**

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The information in this prospectus is not complete and may be changed. We may not sell the 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 is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED MARCH 27, 2020

PROSPECTUS

**\$200,000,000**



**By this prospectus, we may offer, from time to time:**

- Common stock
- Preferred stock
- Depositary shares
- Warrants
- Debt securities

All of the securities listed above may be sold separately or as units with other securities.

This prospectus may not be used to sell securities unless accompanied by a prospectus supplement, which will describe the method and the terms of the offering. We will provide you with specific the amount, price and terms of the applicable offered securities in one or more supplements to this prospectus. You should read this prospectus and any supplement carefully before you purchase any of our securities.

Our common stock is listed on the Nasdaq Capital Market under the symbol "SAVA." On March 20, 2020, the closing price of our common stock on the Nasdaq Capital Market was \$3.87 per share.

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**Investing in our securities involves risk. Please carefully read the information under "Risk Factors" beginning on page 4 for information you should consider before investing in our securities.**

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

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We may offer the securities in amounts, at prices and on terms determined at the time of offering. We may sell the securities directly to you, through agents we select, or through underwriters and dealers we select. If we use agents, underwriters or dealers to sell the securities, we will name them and describe their compensation in a prospectus supplement. In addition, the underwriters may overallocate a portion of the securities. For additional information regarding the methods of sale of our securities, you should refer to the section entitled "Plan of Distribution" in this prospectus.

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, using a “shelf” registration process. Under this shelf process, we may, from time to time, offer or sell any combination of the securities described in this prospectus in one or more offerings up to a total dollar amount of \$200,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add to, update or change information contained in the prospectus or in the documents incorporated by reference in the prospectus. To the extent inconsistent, information in this prospectus is superseded by the information in the prospectus supplement.

The prospectus supplement to be attached to the front of this prospectus may describe, as applicable: the terms of the securities offered; the initial public offering price; the price paid for the securities; net proceeds; and the other specific terms related to the offering of the securities.

You should only rely on the information contained or incorporated by reference in this prospectus and any prospectus supplement or issuer free writing prospectus relating to a particular offering. No person has been authorized to give any information or make any representations in connection with this offering other than those contained or incorporated by reference in this prospectus, any accompanying prospectus supplement and any related issuer free writing prospectus in connection with the offering described herein and therein, and, if given or made, such information or representations must not be relied upon as having been authorized by us. Neither this prospectus nor any prospectus supplement nor any related issuer free writing prospectus shall constitute an offer to sell or a solicitation of an offer to buy offered securities in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation. This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. You should read the entire prospectus and any prospectus supplement and any related issuer free writing prospectus, as well as the documents incorporated by reference into this prospectus or any prospectus supplement or any related issuer free writing prospectus, before making an investment decision. Neither the delivery of this prospectus or any prospectus supplement or any issuer free writing prospectus nor any sale made hereunder shall under any circumstances imply that the information contained or incorporated by reference herein or in any prospectus supplement or issuer free writing prospectus is correct as of any date subsequent to the date hereof or of such prospectus supplement or issuer free writing prospectus, as applicable.

## PROSPECTUS SUMMARY

*The following summary highlights information contained in this prospectus or incorporated by reference. While we have included what we believe to be the most important information about the company and this offering, the following summary may not contain all the information that may be important to you. You should read this entire prospectus carefully, including the risks of investing discussed under “Risk Factors” beginning on page 4, the information to which we refer you and the information incorporated into this prospectus by reference, for a complete understanding of our business and this offering. References in this prospectus to “our company,” “we,” “our,” “Cassava Sciences” and “us” refer to Cassava Sciences, Inc.*

### Cassava Sciences, Inc.

#### Overview

Cassava Sciences, Inc. is a clinical stage biotechnology company. Our mission is to detect and treat neurodegenerative diseases, such as Alzheimer’s disease. Our novel science is based on stabilizing – but not removing – a critical protein in the brain.

Over the past 10 years, we have combined state-of-the-art technology with new insights in neurobiology to develop novel solutions for Alzheimer’s disease and other neurodegenerative diseases. Our strategy is to leverage our unique scientific/clinical platform to develop a first-in-class program for treating neurodegenerative diseases, such as Alzheimer’s.

We currently have two clinical-stage biopharmaceutical assets under development:

- our lead therapeutic product candidate, called PTI-125, for the treatment of Alzheimer’s disease; and
- our lead investigational diagnostic product candidate, called SavaDx, to detect Alzheimer’s disease from a small sample of blood, possibly years before the overt appearance of clinical symptoms.

Our scientific approach for the treatment of Alzheimer’s disease seeks to simultaneously improve *both* neurodegeneration and neuroinflammation. We believe our ability to improve multiple vital functions in the brain represents a new, different and crucial approach to address Alzheimer’s disease.

#### Corporate Information

We were incorporated in Delaware in May 1998. Our principal executive offices are located at 7801 N Capital of Texas Highway, Suite 260, Austin, TX, 78731 and our telephone number at that address is (512) 501-2444.

#### The securities we may offer

We may offer up to \$200 million of common stock, preferred stock, depositary shares, warrants and debt securities in one or more offerings and in any combination. This prospectus provides you with a general description of the securities we may offer. A prospectus supplement, which we will provide each time we offer securities, will describe the specific amounts, prices and terms of these securities.

We may sell the securities to or through underwriters, dealers or agents or directly to purchasers or as otherwise set forth below under “Plan of Distribution.” We, as well as any agents acting on our behalf, reserve the sole right to accept and to reject in whole or in part any proposed purchase of securities. Each prospectus supplement will set forth the names of any underwriters, dealers, agents or other entities involved in the sale of securities described in that prospectus supplement and any applicable fee, commission or discount arrangements with them.

#### Common stock

We may offer shares of our common stock, par value \$0.001 per share, either alone or underlying other registered securities convertible into our common stock. Holders of our common stock are entitled to receive dividends

declared by our board of directors out of funds legally available for the payment of dividends, subject to rights, if any, of preferred stockholders. Currently, we do not pay a dividend. Each holder of common stock is entitled to one vote per share. The holders of common stock have no preemptive rights.

### **Preferred stock and depositary shares**

We may issue preferred stock in one or more series. Our board of directors or a committee designated by the board will determine the dividend, voting and conversion rights and other provisions at the time of sale. Each series of preferred stock will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions, rights in the event of liquidation, dissolution or the winding up of Cassava Sciences, Inc., voting rights and rights to convert into common stock. We may also issue fractional shares of preferred stock that will be represented by depositary shares and depositary receipts. Each particular series of depositary shares will be more fully described in the prospectus supplement that will accompany this prospectus.

### **Warrants**

We may issue warrants for the purchase of common stock, preferred stock or debt securities. We may issue warrants independently or together with other securities.

### **Debt securities**

We may offer secured or unsecured obligations in the form of one or more series of senior or subordinated debt. The senior debt securities and the subordinated debt securities are together referred to in this prospectus as the “debt securities.” The senior debt securities will have the same rank as all of our other unsubordinated debt. The subordinated debt securities generally will be entitled to payment only after payment of our senior debt. Senior debt generally includes all debt for money borrowed by us, except debt that is stated in the instrument governing the terms of that debt to be not senior to, or to have the same rank in right of payment as, or to be expressly junior to, the subordinated debt securities. We may issue debt securities that are convertible into shares of our common stock.

The senior and subordinated debt securities will be issued under separate indentures between us and a trustee. We have summarized the general features of the debt securities to be governed by the indentures. These indentures have been filed as exhibits to the registration statement of which this prospectus forms a part. We encourage you to read these indentures. Instructions on how you can get copies of these documents are provided under the heading “Where You Can Find More Information.”

## RISK FACTORS

An investment in our securities involves a high degree of risk. The prospectus supplement applicable to each offering of our securities will contain a discussion of the risks applicable to an investment in our securities. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading “Risk Factors” in the applicable prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under Item 1A, “Risk Factors,” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 which are incorporated herein by reference, and may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future and any prospectus supplement related to a particular offering. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations.

## FORWARD-LOOKING STATEMENTS

This prospectus and the registration statement of which it forms a part, any prospectus supplement, any related issuer free writing prospectus and the documents incorporated by reference into these documents contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements deal with our current plans, intentions, beliefs and expectations and statements of future economic performance. Statements containing terms such as “believe,” “do not believe,” “plan,” “expect,” “intend,” “estimate,” “anticipate” and other phrases of similar meaning are considered to contain uncertainty and are forward-looking statements. In addition, from time to time we or our representatives have made or will make forward-looking statements orally or in writing. Furthermore, such forward-looking statements may be included in various filings that we make with the SEC, or press releases or oral statements made by or with the approval of one of our authorized executive officers. These forward-looking statements are subject to certain known and unknown risks and uncertainties, as well as assumptions that could cause actual results to differ materially from those reflected in these forward-looking statements. Factors that might cause actual results to differ include, but are not limited to, those set forth under Item 1A, “Risk Factors,” and Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operation,” in our most recent Annual Report on Form 10-K and in our future filings made with the SEC. Readers are cautioned not to place undue reliance on any forward-looking statements contained in this prospectus, any prospectus supplement or any related issuer free writing prospectus, which reflect management’s opinions only as of their respective dates. Except as required by law, we undertake no obligation to revise or publicly release the results of any revisions to any forward-looking statements. You are advised, however, to consult any additional disclosures we have made or will make in our reports to the SEC on Forms 10-K, 10-Q and 8-K. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements contained in this prospectus, any prospectus supplement or any related issuer free writing prospectus.

#### **USE OF PROCEEDS**

Unless otherwise indicated in the prospectus supplement, the net proceeds from the sale of securities offered by this prospectus will be used for general corporate purposes and working capital requirements, which may include, among other things, the repayment or repurchase of debt obligations and other capital expenditures. We may also use a portion of the net proceeds for licensing or acquiring intellectual property or technologies to incorporate into our products and product candidates or our research and development programs, capital expenditures, to fund possible investments in and acquisitions of complementary businesses or partnerships. We have not determined the amounts we plan to spend on the areas listed above or the timing of these expenditures, and we have no current plans with respect to acquisitions as of the date of this prospectus. As a result, unless otherwise indicated in the prospectus supplement, our management will have broad discretion to allocate the net proceeds of the offerings. Pending their ultimate use, we intend to invest the net proceeds in a variety of securities, including commercial paper, government and non-government debt securities and/or money market funds that invest in such securities.

#### **DIVIDEND POLICY**

Other than our special nondividend distributions in December 2012 and December 2010, we have not paid cash dividends on our common stock. We do not anticipate paying periodic cash dividends on our common stock for the foreseeable future. We intend to use all available cash and liquid assets in the operation and growth of our business. Any future determination about the payment of dividends will be made at the discretion of our board of directors and will depend upon our earnings, if any, capital requirements, operating and financial conditions and on such other factors as our board of directors deems relevant.

**General**

As of the date of this prospectus, our authorized capital stock consists of 130,000,000 shares. Those shares consist of 120,000,000 shares designated as common stock, \$0.001 par value, and 10,000,000 shares designated as preferred stock, \$0.001 par value. The only equity securities currently outstanding are shares of common stock. As of December 31, 2019, there were 21,841,810 shares of common stock issued and outstanding.

The following is a summary of the material provisions of the common stock and preferred stock provided for in our amended and restated certificate of incorporation (including the certificate of designation relating to the Series A Preferred) and bylaws. For additional detail about our capital stock, please refer to our amended and restated certificate of incorporation (including the certificate of designation relating to the Series A Preferred), and bylaws, each as amended, copies of which are incorporated by reference into the registration statement to which this prospectus relates.

**Common stock**

The holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably any dividends that may be declared from time to time by the board of directors out of funds legally available for that purpose. However, we are not currently paying any dividends. In the event of our liquidation, dissolution or winding up, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock then outstanding. The common stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. The outstanding shares of common stock are fully paid and non-assessable, and any shares of common stock to be issued upon an offering pursuant to this prospectus and the related prospectus supplement will be fully paid and nonassessable upon issuance.

Our common stock is listed on the Nasdaq Capital Market under the symbol “SAVA.” The transfer agent and registrar for the common stock is Computershare Shareowner Services LLC. Its address is 330 N Brand Boulevard, Suite 701, Glendale, California, 91203-2389.

**Preferred stock**

The following description of preferred stock and the description of the terms of any particular series of preferred stock that we choose to issue hereunder and that will be set forth in the related prospectus supplement are not complete. These descriptions are qualified in their entirety by reference to our amended and restated certificate of incorporation and the certificate of designation relating to that series. The rights, preferences, privileges and restrictions of the preferred stock of each series will be fixed by the certificate of designation relating to that series. The prospectus supplement also will contain a description of certain U.S. federal income tax consequences relating to the purchase and ownership of the series of preferred stock that is described in the prospectus supplement.

We currently have no shares of preferred stock outstanding. Our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions granted to or imposed upon the preferred stock. Any or all of these rights may be greater than the rights of the common stock.

The board of directors, without stockholder approval, can issue preferred stock with voting, conversion or other rights that could negatively affect the voting power and other rights of the holders of common stock. Preferred stock could thus be issued quickly with terms calculated to delay or prevent a change in control of us or make it more difficult to remove our management. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of the common stock.

The prospectus supplement for a series of preferred stock will specify:

- ☐ the maximum number of shares;
- ☐ the designation of the shares;
- ☐ the annual dividend rate, if any, whether the dividend rate is fixed or variable, the date or dates on which dividends will accrue, the dividend payment dates, and whether dividends will be cumulative;
- ☐ the price and the terms and conditions for redemption, if any, including redemption at our option or at the option of the holders, including the time period for redemption, and any accumulated dividends or premiums;
- ☐ the liquidation preference, if any, and any accumulated dividends upon the liquidation, dissolution or winding up of our affairs;
- ☐ any sinking fund or similar provision, and, if so, the terms and provisions relating to the purpose and operation of the fund;
- ☐ the terms and conditions, if any, for conversion or exchange of shares of any other class or classes of our capital stock or any series of any other class or classes, or of any other series of the same class, or any other securities or assets, including the price or the rate of conversion or exchange and the method, if any, of adjustment;
- ☐ the voting rights; and
- ☐ any or all other preferences and relative, participating, optional or other special rights, privileges or qualifications, limitations or restrictions.

Preferred stock will be fully paid and nonassessable upon issuance.

#### **Anti-takeover effects of some provisions of Delaware law**

Provisions of Delaware law and our currently in effect amended and restated certificate of incorporation and amended bylaws could make the acquisition of our company through a tender offer, a proxy contest or other means more difficult and could make the removal of incumbent officers and directors more difficult. We expect these provisions to discourage coercive takeover practices and inadequate takeover bids and to encourage persons seeking to acquire control of our company to first negotiate with our board of directors. We believe that the benefits provided by our ability to negotiate with the proponent of an unfriendly or unsolicited proposal outweigh the disadvantages of discouraging these proposals. We believe the negotiation of an unfriendly or unsolicited proposal could result in an improvement of its terms.

We are subject to Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years following the date the person became an interested stockholder, unless:

- ☐ Prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

- ☐ The stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers, and (b) shares owned by 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 subsequent to the date of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation’s outstanding voting securities. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

#### **Anti-takeover effects of provisions of our charter documents**

Our amended and restated certificate of incorporation provides for our board of directors to be divided into three classes serving staggered terms. Approximately one-third of the board of directors will be elected each year. The provision for a classified board could prevent a party who acquires control of a majority of the outstanding voting stock from obtaining control of the board of directors until the second annual stockholders meeting following the date the acquirer obtains the controlling stock interest. The classified board provision could discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of our company and could increase the likelihood that incumbent directors will retain their positions. Our amended and restated certificate of incorporation provides that directors may be removed with cause by the affirmative vote of the holders of the outstanding shares of common stock.

Our amended and restated certificate of incorporation requires that certain amendments of the amended and restated certificate of incorporation and certain amendments by the stockholders of our bylaws require the approval of at least 66 2/3% of the voting power of all outstanding stock. These provisions could discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of our company and could delay changes in our management.

Our amended 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. At an annual meeting, stockholders 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. Stockholders may also consider a proposal or nomination by a person 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 to our Secretary timely written notice, in proper form, of his or her intention to bring that business before the meeting. The amended 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 of the stockholders. However, our bylaws may have the effect of precluding the conduct of business at a meeting if the proper procedures are not followed. These provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer’s own slate of directors or otherwise attempting to obtain control of our company.

Our amended bylaws provide that only our board of directors, the chairman of the board, the president or the chief executive officer may call a special meeting of stockholders. Because our stockholders do not have the right to call a special meeting, a stockholder could not force stockholder consideration of a proposal over the opposition of the board of directors by calling a special meeting of stockholders prior to such time as a majority of the board of directors believed or the chief executive officer believed the matter should be considered or until the next annual meeting provided that the requestor met the notice requirements. The restriction on the ability of stockholders to call



a special meeting means that a proposal to replace the board also could be delayed until the next annual meeting.

Our amended and restated certificate of incorporation does not allow stockholders to act by written consent without a meeting. Without the availability of stockholder's actions by written consent, a holder controlling a majority of our capital stock would not be able to amend our bylaws or remove directors without holding a stockholders' meeting. The holder would have to obtain the consent of a majority of the board of directors, the chairman of the board or the chief executive officer to call a stockholders' meeting and satisfy the notice periods determined by the board of directors.

**General**

At our option, we may elect to offer fractional shares of preferred stock, rather than full shares of preferred stock. If we do elect to offer fractional shares of preferred stock, we will issue receipts for depositary shares and each of these depositary shares will represent a fraction of a share of a particular series of preferred stock, as specified in the applicable prospectus supplement. Each owner of a depositary share will be entitled, in proportion to the applicable fractional interest in shares of preferred stock underlying that depositary share, to all rights and preferences of the preferred stock underlying that depositary share. These rights may include dividend, voting, redemption and liquidation rights.

The shares of preferred stock underlying the depositary shares will be deposited with a bank or trust company selected by us to act as depositary, under a deposit agreement by and among us, the depositary and the holders of the depositary receipts. The depositary will be the transfer agent, registrar and dividend disbursing agent for the depositary shares.

The depositary shares will be evidenced by depositary receipts issued pursuant to the depositary agreement. Holders of depositary receipts agree to be bound by the deposit agreement, which requires holders to take certain actions such as filing proof of residence and paying certain charges.

The summary of terms of the depositary shares contained in this prospectus is not complete, and is subject to modification in any prospectus supplement for any issuance of depositary shares. You should refer to the forms of the deposit agreement, our amended and restated certificate of incorporation and the certificate of designation that are, or will be, filed with the SEC for the applicable series of preferred stock.

**Dividends**

The depositary will distribute cash dividends or other cash distributions, if any, received in respect of the series of preferred stock underlying the depositary shares to the record holders of depositary receipts in proportion to the number of depositary shares owned by those holders on the relevant record date. The relevant record date for depositary shares will be the same date as the record date for the preferred stock.

In the event of a distribution other than in cash, the depositary will distribute property received by it to the record holders of depositary receipts that are entitled to receive the distribution, unless the depositary determines that it is not feasible to make the distribution. If this occurs, the depositary, with our approval, may adopt another method for the distribution, including selling the property and distributing the net proceeds to the holders.

**Liquidation preference**

If a series of preferred stock underlying the depositary shares has a liquidation preference, in the event of our voluntary or involuntary liquidation, dissolution or winding up, holders of depositary shares will be entitled to receive the fraction of the liquidation preference accorded each share of the applicable series of preferred stock, as set forth in the applicable prospectus supplement.

**Redemption**

If a series of preferred stock underlying the depositary shares is subject to redemption, the depositary shares will be redeemed from the proceeds received by the depositary resulting from the redemption, in whole or in part, of the preferred stock held by the depositary. Whenever we redeem any preferred stock held by the depositary, the depositary will redeem, as of the same redemption date, the number of depositary shares representing the preferred stock so redeemed. The depositary will mail the notice of redemption to the record holders of the depositary receipts promptly upon receiving the notice from us and not fewer than 20 or more than 60 days, unless otherwise provided in the applicable prospectus supplement, prior to the date fixed for redemption of the preferred stock.

## **Voting**

Upon receipt of notice of any meeting at which the holders of preferred stock are entitled to vote, the depositary will mail the information contained in the notice of meeting to the record holders of the depositary receipts underlying the preferred stock. Each record holder of those depositary receipts on the record date will be entitled to instruct the depositary as to the exercise of the voting rights pertaining to the amount of preferred stock underlying that holder's depositary shares. The record date for the depositary will be the same date as the record date for the preferred stock. The depositary will, to the extent practicable, vote the preferred stock underlying the depositary shares in accordance with these instructions. We will agree to take all action that may be deemed necessary by the depositary in order to enable the depositary to vote the preferred stock in accordance with these instructions. The depositary will not vote the preferred stock to the extent that it does not receive specific instructions from the holders of depositary receipts.

## **Withdrawal of preferred stock**

Owners of depositary shares will be entitled to receive upon surrender of depositary receipts at the principal office of the depositary and payment of any unpaid amount due to the depositary, the number of whole shares of preferred stock underlying their depositary shares.

Partial shares of preferred stock will not be issued. Holders of preferred stock will not be entitled to deposit the shares under the deposit agreement or to receive depositary receipts evidencing depositary shares for the preferred stock.

## **Amendment and termination of the deposit agreement**

The form of depositary receipt evidencing the depositary shares and any provision of the deposit agreement may be amended by agreement between the depositary and us. However, any amendment which materially and adversely alters the rights of the holders of depositary shares, other than fee changes, will not be effective unless the amendment has been approved by at least a majority of the outstanding depositary shares. The deposit agreement may be terminated by the depositary or us only if:

- ☐ all outstanding depositary shares have been redeemed; or
- ☐ there has been a final distribution of the preferred stock in connection with our dissolution and such distribution has been made to all the holders of depositary shares.

## **Charges of depositary**

We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depositary arrangement. We will also pay charges of the depositary in connection with:

- ☐ the initial deposit of the preferred stock;
- ☐ the initial issuance of the depositary shares;
- ☐ any redemption of the preferred stock; and
- ☐ all withdrawals of preferred stock by owners of depositary shares.

Holders of depositary receipts will pay transfer, income and other taxes and governmental charges and other specified charges as provided in the deposit agreement for their accounts. If these charges have not been paid, the depositary may:

- ☐ refuse to transfer depositary shares;

- ☐ withhold dividends and distributions; and
- ☐ sell the depositary shares evidenced by the depositary receipt.

### **Miscellaneous**

The depositary will forward to the holders of depositary receipts all reports and communications we deliver to the depositary that we are required to furnish to the holders of the preferred stock. In addition, the depositary will make available for inspection by holders of depositary receipts at the principal office of the depositary, and at such other places as it may from time to time deem advisable, any reports and communications we deliver to the depositary as the holder of preferred stock.

Neither the depositary nor we will be liable if either the depositary or we are prevented or delayed by law or any circumstance beyond the control of either the depositary or us in performing our respective obligations under the deposit agreement. Our obligations and the depositary's obligations will be limited to the performance in good faith of our or the depositary's respective duties under the deposit agreement. Neither the depositary nor we will be obligated to prosecute or defend any legal proceeding in respect of any depositary shares or preferred stock unless satisfactory indemnity is furnished. The depositary and we may rely on:

- ☐ written advice of counsel or accountants;
- ☐ information provided by holders of depositary receipts or other persons believed in good faith to be competent to give such information; and
- ☐ documents believed to be genuine and to have been signed or presented by the proper party or parties.

### **Resignation and removal of depositary**

The depositary may resign at any time by delivering a notice to us. We may remove the depositary at any time. Any such resignation or removal will take effect upon the appointment of a successor depositary and its acceptance of such appointment. The successor depositary must be appointed within 60 days after delivery of the notice for resignation or removal. The successor depositary must be a bank and trust company having its principal office in the United States of America and having a combined capital and surplus of at least \$50,000,000.

### **Federal income tax consequences**

Owners of the depositary shares will be treated for U.S. federal income tax purposes as if they were owners of the preferred stock underlying the depositary shares. As a result, owners will be entitled to take into account for U.S. federal income tax purposes and deductions to which they would be entitled if they were holders of such preferred stock. No gain or loss will be recognized for U.S. federal income tax purposes upon the withdrawal of preferred stock in exchange for depositary shares. The tax basis of each share of preferred stock to an exchanging owner of depositary shares will, upon such exchange, be the same as the aggregate tax basis of the depositary shares exchanged. The holding period for preferred stock in the hands of an exchanging owner of depositary shares will include the period during which such person owned such depositary shares.

**General**

We may issue warrants for the purchase of our debt securities, preferred stock or common stock, or any combination thereof. Warrants may be issued independently or together with our debt securities, preferred stock or common stock and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants. The warrant agent will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. This summary of certain provisions of the warrants is not complete. For the terms of a particular series of warrants, you should refer to the prospectus supplement for that series of warrants and the warrant agreement for that particular series.

**Debt warrants**

The prospectus supplement relating to a particular issue of warrants to purchase debt securities will describe the terms of the debt warrants, including the following:

- ☐ the title of the debt warrants;
- ☐ the offering price for the debt warrants, if any;
- ☐ the aggregate number of the debt warrants;
- ☐ the designation and terms of the debt securities, including any conversion rights, purchasable upon exercise of the debt warrants;
- ☐ if applicable, the date from and after which the debt warrants and any debt securities issued with them will be separately transferable;
- ☐ the principal amount of debt securities that may be purchased upon exercise of a debt warrant and the exercise price for the warrants, which may be payable in cash, securities or other property;
- ☐ the dates on which the right to exercise the debt warrants will commence and expire;
- ☐ if applicable, the minimum or maximum amount of the debt warrants that may be exercised at any one time;
- ☐ whether the debt warrants represented by the debt warrant certificates or debt securities that may be issued upon exercise of the debt warrants will be issued in registered or bearer form;
- ☐ information with respect to book-entry procedures, if any; the currency or currency units in which the offering price, if any, and the exercise price are payable;
- ☐ if applicable, a discussion of material U.S. federal income tax considerations;
- ☐ the antidilution provisions of the debt warrants, if any;
- ☐ the redemption or call provisions, if any, applicable to the debt warrants;
- ☐ any provisions with respect to the holder's right to require us to repurchase the warrants upon a change in control or similar event; and

- ☐ any additional terms of the debt warrants, including procedures, and limitations relating to the exchange, exercise and settlement of the debt warrants.

Debt warrant certificates will be exchangeable for new debt warrant certificates of different denominations. Debt warrants may be exercised at the corporate trust office of the warrant agent or any other office indicated in the prospectus supplement. Prior to the exercise of their debt warrants, holders of debt warrants will not have any of the rights of holders of the debt securities purchasable upon exercise and will not be entitled to payment of principal or any premium, if any, or interest on the debt securities purchasable upon exercise.

### **Equity warrants**

The prospectus supplement relating to a particular series of warrants to purchase our common stock or preferred stock will describe the terms of the warrants, including the following:

- ☐ the title of the warrants;
- ☐ the offering price for the warrants, if any;
- ☐ the aggregate number of warrants;
- ☐ the designation and terms of the common stock or preferred stock that may be purchased upon exercise of the warrants;
- ☐ if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each security;
- ☐ if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- ☐ the number of shares of common stock or preferred stock that may be purchased upon exercise of a warrant and the exercise price for the warrants;
- ☐ the dates on which the right to exercise the warrants shall commence and expire;
- ☐ if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- ☐ the currency or currency units in which the offering price, if any, and the exercise price are payable;
- ☐ if applicable, a discussion of material U.S. federal income tax considerations;
- ☐ the antidilution provisions of the warrants, if any;
- ☐ the redemption or call provisions, if any, applicable to the warrants;
- ☐ any provisions with respect to the holder's right to require us to repurchase the warrants upon a change in control or similar event; and
- ☐ any additional terms of the warrants, including procedures, and limitations relating to the exchange, exercise and settlement of the warrants.

Holders of equity warrants will not be entitled:

- ☐ to vote, consent or receive dividends;
- ☐ receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter; or
- ☐ exercise any rights as stockholders of us.

## DESCRIPTION OF THE DEBT SECURITIES

The debt securities may be either secured or unsecured and will either be our senior debt securities or our subordinated debt securities. The debt securities will be issued under one or more separate indentures between us and a trustee to be specified in an accompanying prospectus supplement. Senior debt securities will be issued under a senior indenture and subordinated debt securities will be issued under a subordinated indenture. Together, the senior indenture and the subordinated indenture are called indentures in this description. This prospectus, together with the applicable prospectus supplement, will describe the terms of a particular series of debt securities.

The following is a summary of selected provisions and definitions of the indentures and debt securities to which any prospectus supplement may relate. The summary of selected provisions of the indentures and the debt securities appearing below is not complete and is subject to, and qualified entirely by reference to, all of the provisions of the applicable indenture and certificates evidencing the applicable debt securities. For additional information, you should look at the applicable indenture and the certificate evidencing the applicable debt security that is filed as an exhibit to the registration statement that includes the prospectus. In this description of the debt securities, the words “Cassava Sciences,” “we,” “us,” or “our” refer only to Cassava Sciences, Inc. and not to any of our subsidiaries, unless we expressly state or the context otherwise requires.

The following description sets forth selected general terms and provisions of the applicable indenture and debt securities to which any prospectus supplement may relate. Other specific terms of the applicable indenture and debt securities will be described in the applicable prospectus supplement. If any particular terms of the indenture or debt securities described in a prospectus supplement differ from any of the terms described below, then the terms described below will be deemed to have been superseded by that prospectus supplement.

### General

Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series.

We are not limited as to the amount of debt securities we may issue under the indentures. Unless otherwise provided in a prospectus supplement, a series of debt securities may be reopened to issue additional debt securities of such series.

The prospectus supplement relating to a particular series of debt securities will set forth:

- ☐ whether the debt securities are senior or subordinated;
- ☐ the offering price;
- ☐ the title;
- ☐ any limit on the aggregate principal amount;
- ☐ the person who shall be entitled to receive interest, if other than the record holder on the record date;
- ☐ the date or dates the principal will be payable;
- ☐ the interest rate or rates, which may be fixed or variable, if any, the date from which interest will accrue, the interest payment dates and the regular record dates, or the method for calculating the dates and rates;
- ☐ the place where payments may be made;



- ☐ any mandatory or optional redemption provisions or sinking fund provisions and any applicable redemption or purchase prices associated with these provisions;
- ☐ if issued other than in denominations of U.S. \$1,000 or any multiple of U.S. \$1,000, the denominations in which the debt securities shall be issuable;
- ☐ if applicable, the method for determining how the principal, premium, if any, or interest will be calculated by reference to an index or formula;
- ☐ if other than U.S. currency, the currency or currency units in which principal, premium, if any, or interest will be payable and whether we or a holder may elect payment to be made in a different currency;
- ☐ the portion of the principal amount that will be payable upon acceleration of maturity, if other than the entire principal amount;
- ☐ if the principal amount payable at stated maturity will not be determinable as of any date prior to stated maturity, the amount or method for determining the amount which will be deemed to be the principal amount;
- ☐ if applicable, whether the debt securities shall be subject to the defeasance provisions described below under “Satisfaction and discharge; defeasance” or such other defeasance provisions specified in the applicable prospectus supplement for the debt securities;
- ☐ any conversion or exchange provisions;
- ☐ whether the debt securities will be issuable in the form of a global security;
- ☐ any subordination provisions applicable to the subordinated debt securities if different from those described below under “Subordinated debt securities;”
- ☐ any paying agents, authenticating agents, security registrars or other agents for the debt securities, if other than the trustee;
- ☐ any provisions relating to any security provided for the debt securities, including any provisions regarding the circumstances under which collateral may be released or substituted;
- ☐ any deletions of, or changes or additions to, the events of default, acceleration provisions or covenants;
- ☐ any provisions relating to guaranties for the securities and any circumstances under which there may be additional obligors; and
- ☐ any other specific terms of such debt securities.

Unless otherwise specified in the prospectus supplement, the debt securities will be registered debt securities. Debt securities may be sold at a substantial discount below their stated principal amount, bearing no interest or interest at a rate which, at the time of issuance, is below market rates. The U.S. federal income tax considerations applicable to debt securities sold at a discount will be described in the applicable prospectus supplement.

#### **Exchange and transfer**

Debt securities may be transferred or exchanged at the office of the security registrar or at the office of any

transfer agent designated by us.

We will not impose a service charge for any transfer or exchange, but we may require holders to pay any tax or other governmental charges associated with any transfer or exchange.

In the event of any partial redemption of debt securities of any series, we will not be required to:

- ☐ issue, register the transfer of, or exchange, any debt security of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption and ending at the close of business on the day of the mailing; or
- ☐ register the transfer of or exchange any debt security of that series selected for redemption, in whole or in part, except the unredeemed portion being redeemed in part.

We will appoint the trustee as the initial security registrar. Any transfer agent, in addition to the security registrar initially designated by us, will be named in the prospectus supplement. We may designate additional transfer agents or change transfer agents or change the office of the transfer agent. However, we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

#### **Global securities**

The debt securities of any series may be represented, in whole or in part, by one or more global securities. Each global security will:

- ☐ be registered in the name of a depositary, or its nominee, that we will identify in a prospectus supplement;
- ☐ be deposited with the depositary or nominee or custodian; and
- ☐ bear any required legends.

No global security may be exchanged in whole or in part for debt securities registered in the name of any person other than the depositary or any nominee unless:

- ☐ the depositary has notified us that it is unwilling or unable to continue as depositary or has ceased to be qualified to act as depositary;
- ☐ an event of default is continuing with respect to the debt securities of the applicable series; or
- ☐ any other circumstance described in a prospectus supplement has occurred permitting or requiring the issuance of any such security.

As long as the depositary, or its nominee, is the registered owner of a global security, the depositary or nominee will be considered the sole owner and holder of the debt securities represented by the global security for all purposes under the indentures. Except in the above limited circumstances, owners of beneficial interests in a global security will not be:

- ☐ entitled to have the debt securities registered in their names;
- ☐ entitled to physical delivery of certificated debt securities; or
- ☐ considered to be holders of those debt securities under the indenture.

Payments on a global security will be made to the depositary or its nominee as the holder of the global security. Some jurisdictions have laws that require that certain purchasers of securities take physical delivery of such securities in definitive form. These laws may impair the ability to transfer beneficial interests in a global security.

Institutions that have accounts with the depositary or its nominee are referred to as “participants.” Ownership of beneficial interests in a global security will be limited to participants and to persons that may hold beneficial interests through participants. The depositary will credit, on its book-entry registration and transfer system, the respective principal amounts of debt securities represented by the global security to the accounts of its participants.

Ownership of beneficial interests in a global security will be shown on and effected through records maintained by the depositary, with respect to participants’ interests, or any participant, with respect to interests of persons held by participants on their behalf.

Payments, transfers and exchanges relating to beneficial interests in a global security will be subject to policies and procedures of the depositary. The depositary policies and procedures may change from time to time. Neither any trustee nor we will have any responsibility or liability for the depositary’s or any participant’s records with respect to beneficial interests in a global security.

#### **Payment and paying agents**

Unless otherwise indicated in a prospectus supplement, the provisions described in this paragraph will apply to the debt securities. Payment of interest on a debt security on any interest payment date will be made to the person in whose name the debt security is registered at the close of business on the regular record date. Payment on debt securities of a particular series will be payable at the office of a paying agent or paying agents designated by us. However, at our option, we may pay interest by mailing a check to the record holder. The trustee will be designated as our initial paying agent.

We may also name any other paying agents in a prospectus supplement. We may designate additional paying agents, change paying agents or change the office of any paying agent. However, we will be required to maintain a paying agent in each place of payment for the debt securities of a particular series.

All moneys paid by us to a paying agent for payment on any debt security that remain unclaimed for a period ending the earlier of:

☐ 10 business days prior to the date the money would be turned over to the applicable state; or

☐ at the end of two years after such payment was due,  
will be repaid to us thereafter. The holder may look only to us for such payment.

#### **No protection in the event of a change of control**

Unless otherwise indicated in a prospectus supplement with respect to a particular series of debt securities, the debt securities will not contain any provisions that may afford holders of the 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.

#### **Covenants**

Unless otherwise indicated in a prospectus supplement with respect to a particular series of debt securities, the debt securities will not contain any financial or restrictive covenants.

#### **Consolidation, merger and sale of assets**

Unless we indicate otherwise in a prospectus supplement with respect to a particular series of debt securities, we may not consolidate with or merge into any other person (other than a subsidiary of us), 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 (other than a subsidiary of us), unless:

- ☐ the successor entity, if any, is a U.S. corporation, limited liability company, partnership, trust or other business entity;
- ☐ the successor entity assumes our obligations on the debt securities and under the indentures;
- ☐ immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing; and
- ☐ certain other conditions specified in the indenture are met.

#### **Events of default**

Unless we indicate otherwise in a prospectus supplement, the following will be events of default for any series of debt securities under the indentures:

- (1) we fail to pay principal of or any premium on any debt security of that series when due;
- (2) we fail to pay any interest on any debt security of that series for 60 days after it becomes due;
- (3) we fail to deposit any sinking fund payment when due;
- (4) we fail to perform any other covenant in the indenture and such failure continues for 90 days after we are given the notice required in the indentures; and
- (5) certain events involving our bankruptcy, insolvency or reorganization.

Additional or different events of default applicable to a series of debt securities may be described in a prospectus supplement. An event of default of one series of debt securities is not necessarily an event of default for any other series of debt securities.

The trustee may withhold notice to the holders of any default, except defaults in the payment of principal, premium, if any, interest, any sinking fund installment on, or with respect to any conversion right of, the debt securities of such series. However, the trustee must consider it to be in the interest of the holders of the debt securities of such series to withhold this notice.

Unless we indicate otherwise in a prospectus supplement, if an event of default, other than an event of default described in clause (5) above, shall occur and be continuing with respect to any series of debt securities, either the trustee or the holders of at least a 25 percent in aggregate principal amount of the outstanding securities of that series may declare the principal amount and premium, if any, of the debt securities of that series, or if any debt securities of that series are original issue discount securities, such other amount as may be specified in the applicable prospectus supplement, in each case together with accrued and unpaid interest, if any, thereon, to be due and payable immediately.

Unless we indicate otherwise in a prospectus supplement, if an event of default described in clause (5) above shall occur, the principal amount and premium, if any, of all the debt securities of that series, or if any debt securities of that series are original issue discount securities, such other amount as may be specified in the applicable prospectus supplement, in each case together with accrued and unpaid interest, if any, thereon, will automatically become immediately due and payable. Any payment by us on the subordinated debt securities following any such acceleration will be subject to the subordination provisions described below under “Subordinated debt securities.”

Notwithstanding the foregoing, each indenture will provide that we may, at our option, elect that the sole remedy for an event of default relating to our failure to comply with our obligations described under the section entitled “Reports” below or our failure to comply with the requirements of Section 314(a)(1) of the Trust Indenture Act will for the first 180 days after the occurrence of such an event of default consist exclusively of the right to receive additional interest on the relevant series of debt securities at an annual rate equal to (i) 0.25% of the principal amount of such series of debt securities for the first 90 days after the occurrence of such event of default and (ii) 0.50% of the principal amount of such series of debt securities from the 91st day to, and including, the 180th day after the occurrence

of such event of default, which we call “additional interest.” If we so elect, the additional interest will accrue on all outstanding debt securities from and including the date on which such event of default first occurs until such violation is cured or waived and shall be payable on each relevant interest payment date to holders of record on the regular record date immediately preceding the interest payment date. On the 181st day after such event of default (if such violation is not cured or waived prior to such 181st day), the debt securities will be subject to acceleration as provided above. In the event we do not elect to pay additional interest upon any such event of default in accordance with this paragraph, the debt securities will be subject to acceleration as provided above.

In order to elect to pay the additional interest as the sole remedy during the first 180 days after the occurrence of any event of default relating to the failure to comply with the reporting obligations in accordance with the preceding paragraph, we must notify all holders of debt securities and the trustee and paying agent of such election prior to the close of business on the first business day following the date on which such event of default occurs. Upon our failure to timely give such notice or pay the additional interest, the debt securities will be immediately subject to acceleration as provided above.

After acceleration, the holders of a majority in aggregate principal amount of the outstanding securities of that series may, under certain circumstances, rescind and annul such acceleration if all events of default, other than the non-payment of accelerated principal, or other specified amounts or interest, have been cured or waived.

Other than the duty to act with the required care during an event of default, the trustee will not be obligated to exercise any of its rights or powers at the request of the holders unless the holders shall have offered to the trustee reasonable indemnity. Generally, the holders of a majority in aggregate principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee.

A holder of debt securities of any series will not have any right to institute any proceeding under the indentures, or for the appointment of a receiver or a trustee, or for any other remedy under the indentures, unless:

- (1) the holder has previously given to the trustee written notice of a continuing event of default with respect to the debt securities of that series;
- (2) the holders of at least 25 percent in aggregate principal amount of the outstanding debt securities of that series have made a written request and have offered reasonable indemnity to the trustee to institute the proceeding; and
- (3) the trustee has failed to institute the proceeding and has not received direction inconsistent with the original request from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series within 60 days after the original request.

Holders may, however, sue to enforce the payment of principal, premium or interest on any debt security on or after the due date or to enforce the right, if any, to convert any debt security (if the debt security is convertible) without following the procedures listed in (1) through (3) above.

We will furnish the trustee an annual statement from our officers as to whether or not we are in default in the performance of the conditions and covenants under the indenture and, if so, specifying all known defaults.

#### **Modification and waiver**

Unless we indicate otherwise in a prospectus supplement, the applicable trustee and we may make modifications and amendments to an indenture with the consent of the holders of a majority in aggregate principal amount of the outstanding securities of each series affected by the modification or amendment.

We may also make modifications and amendments to the indentures for the benefit of holders without their consent, for certain purposes including, but not limited to:

- ☐ providing for our successor to assume the covenants under the indenture;

- ☐ adding covenants or events of default;
- ☐ making certain changes to facilitate the issuance of the securities;
- ☐ securing the securities;
- ☐ providing for a successor trustee or additional trustees;
- ☐ curing any ambiguities or inconsistencies;
- ☐ providing for guaranties of, or additional obligors on, the securities;
- ☐ permitting or facilitating the defeasance and discharge of the securities; and
- ☐ other changes specified in the indenture.

However, neither the trustee nor we may make any modification or amendment without the consent of the holder of each outstanding security of that series affected by the modification or amendment if such modification or amendment would:

- ☐ change the stated maturity of any debt security;
- ☐ reduce the principal, premium, if any, or interest on any debt security or any amount payable upon redemption or repurchase, whether at our option or the option of any holder, or reduce the amount of any sinking fund payments;
- ☐ reduce the principal of an original issue discount security or any other debt security payable on acceleration of maturity;
- ☐ change the place of payment or the currency in which any debt security is payable;
- ☐ impair the right to enforce any payment after the stated maturity or redemption date;
- ☐ if subordinated debt securities, modify the subordination provisions in a materially adverse manner to the holders;
- ☐ adversely affect the right to convert any debt security if the debt security is a convertible debt security; or
- ☐ change the provisions in the indenture that relate to modifying or amending the indenture.

#### **Satisfaction and discharge; defeasance**

We may be discharged from our obligations on the debt securities, subject to limited exceptions, of any series that have matured or will mature or be redeemed within one year if we deposit enough money with the trustee to pay all the principal, interest and any premium due to the stated maturity date or redemption date of the debt securities.

Each indenture contains a provision that permits us to elect either or both of the following:

- ☐ we may elect to be discharged from all of our obligations, subject to limited exceptions, with respect to any series of debt securities then outstanding. If we make this election, the holders of the debt securities of the series will not be entitled to the benefits of the indenture, except for the rights of holders to receive payments on debt securities or the registration of transfer and exchange of debt securities and replacement of lost, stolen or mutilated debt securities.
- ☐ we may elect to be released from our obligations under some or all of any financial or restrictive covenants applicable to the series of debt securities to which the election relates and from the consequences of an event of default resulting from a breach of those covenants.

To make either of the above elections, we must irrevocably deposit in trust with the trustee enough money to pay in full the principal, interest and premium on the debt securities. This amount may be made in cash and/or U.S. government obligations or, in the case of debt securities denominated in a currency other than U.S. dollars, cash in the currency in which such series of securities is denominated and/or foreign government obligations. As a condition to either of the above elections, for debt securities denominated in U.S. dollars we must deliver to the trustee an opinion of counsel that the holders of the debt securities will not recognize income, gain or loss for U.S. federal income tax purposes as a result of the action.

With respect to debt securities of any series that are denominated in a currency other than United States dollars, “foreign government obligations” means:

- ☐ direct obligations of the government that issued or caused to be issued the currency in which such securities are denominated and for the payment of which obligations its full faith and credit is pledged, or, with respect to debt securities of any series which are denominated in Euros, direct obligations of certain members of the European Union for the payment of which obligations the full faith and credit of such members is pledged, which in each case are not callable or redeemable at the option of the issuer thereof; or
- ☐ obligations of a person controlled or supervised by or acting as an agency or instrumentality of a government described in the bullet above the timely payment of which is unconditionally guaranteed as a full faith and credit obligation by such government, which are not callable or redeemable at the option of the issuer thereof.

### **Reports**

The indentures provide that any reports or documents that we file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act will be filed with the trustee within 15 days after the same is filed with the SEC. Documents filed by us with the SEC via the EDGAR system will be deemed filed with the trustee as of the time such documents are filed with the SEC.

### **Notices**

Notices to holders will be given by mail to the addresses of the holders in the security register.

### **Governing law**

The indentures and the debt securities will be governed by, and construed under, the laws of the State of New York.

### **No personal liability of directors, officers, employees and stockholders**

No incorporator, stockholder, employee, agent, officer, director or subsidiary of ours will have any liability for any obligations of ours, or because of the creation of any indebtedness under the debt securities, the indentures or supplemental indentures. The indentures provide that all such liability is expressly waived and released as a condition of, and as a consideration for, the execution of such indentures and the issuance of the debt securities.

## Regarding the trustee

The indentures limit the right of the trustee, should it become our creditor, to obtain payment of claims or secure its claims.

The trustee will be permitted to engage in certain other transactions with us. However, if the trustee acquires any conflicting interest, and there is a default under the debt securities of any series for which it is trustee, the trustee must eliminate the conflict or resign.

## Subordinated debt securities

The following provisions will be applicable with respect to each series of subordinated debt securities, unless otherwise stated in the prospectus supplement relating to that series of subordinated debt securities.

The indebtedness evidenced by the subordinated debt securities of any series is subordinated, to the extent provided in the subordinated indenture and the applicable prospectus supplement, to the prior payment in full, in cash or other payment satisfactory to the holders of senior debt, of all senior debt, including any senior debt securities.

Upon any distribution of our assets upon any dissolution, winding up, liquidation or reorganization, whether voluntary or involuntary, marshalling of assets, assignment for the benefit of creditors, or in bankruptcy, insolvency, receivership or other similar proceedings, payments on the subordinated debt securities will be subordinated in right of payment to the prior payment in full in cash or other payment satisfactory to holders of senior debt of all senior debt.

In the event of any acceleration of the subordinated debt securities of any series because of an event of default with respect to the subordinated debt securities of that series, holders of any senior debt would be entitled to payment in full in cash or other payment satisfactory to holders of senior debt of all senior debt before the holders of subordinated debt securities are entitled to receive any payment or distribution.

In addition, the subordinated debt securities will be structurally subordinated to all indebtedness and other liabilities of our subsidiaries, including trade payables and lease obligations. This occurs because our right to receive any assets of our subsidiaries upon their liquidation or reorganization, and your right to participate in those assets, will be effectively subordinated to the claims of that subsidiary's creditors, including trade creditors, except to the extent that we are recognized as a creditor of such subsidiary. If we are recognized as a creditor of that subsidiary, our claims would still be subordinate to any security interest in the assets of the subsidiary and any indebtedness of the subsidiary senior to us.

We are required to promptly notify holders of senior debt or their representatives under the subordinated indenture if payment of the subordinated debt securities is accelerated because of an event of default.

Under the subordinated indenture, we may also not make payment on the subordinated debt securities if:

- ☐ a default in our obligations to pay principal, premium, if any, interest or other amounts on our senior debt occurs and the default continues beyond any applicable grace period, which we refer to as a payment default; or
- ☐ any other default occurs and is continuing with respect to designated senior debt that permits holders of designated senior debt to accelerate its maturity, which we refer to as a non-payment default, and the trustee receives a payment blockage notice from us or some other person permitted to give the notice under the subordinated indenture.

We will resume payments on the subordinated debt securities:

- ☐ in case of a payment default, when the default is cured or waived or ceases to exist, and



- ☐ in case of a nonpayment default, the earlier of when the default is cured or waived or ceases to exist or 179 days after the receipt of the payment blockage notice.

No new payment blockage period may commence on the basis of a nonpayment default unless 365 days have elapsed from the effectiveness of the immediately prior payment blockage notice. No nonpayment default that existed or was continuing on the date of delivery of any payment blockage notice to the trustee shall be the basis for a subsequent payment blockage notice.

As a result of these subordination provisions, in the event of our bankruptcy, dissolution or reorganization, holders of senior debt may receive more, ratably, and holders of the subordinated debt securities may receive less, ratably, than our other creditors. The subordination provisions will not prevent the occurrence of any event of default under the subordinated indenture.

The subordination provisions will not apply to payments from money or government obligations held in trust by the trustee for the payment of principal, interest and premium, if any, on subordinated debt securities pursuant to the provisions described under the section entitled "Satisfaction and discharge; defeasance," if the subordination provisions were not violated at the time the money or government obligations were deposited into trust.

If the trustee or any holder receives any payment that should not have been made to them in contravention of subordination provisions before all senior debt is paid in full in cash or other payment satisfactory to holders of senior debt, then such payment will be held in trust for the holders of senior debt.

Senior debt securities will constitute senior debt under the subordinated indenture.

Additional or different subordination provisions may be described in a prospectus supplement relating to a particular series of debt securities.

## Definitions

"Designated senior debt" means our obligations under any particular senior debt in which the instrument creating or evidencing the same or the assumption or guarantee thereof, or related agreements or documents to which we are a party, expressly provides that such indebtedness shall be designated senior debt for purposes of the subordinated indenture. The instrument, agreement or other document evidencing any designated senior debt may place limitations and conditions on the right of such senior debt to exercise the rights of designated senior debt.

"Indebtedness" means the following, whether absolute or contingent, secured or unsecured, due or to become due, outstanding on the date of the indenture for such series of securities or thereafter created, incurred or assumed:

- ☐ our indebtedness evidenced by a credit or loan agreement, note, bond, debenture or other written obligation;
- ☐ all of our obligations for money borrowed;
- ☐ all of our obligations evidenced by a note or similar instrument given in connection with the acquisition of any businesses, properties or assets of any kind,
- ☐ our obligations:
  - ☐ as lessee under leases required to be capitalized on the balance sheet of the lessee under generally accepted accounting principles, or
  - ☐ as lessee under leases for facilities, capital equipment or related assets, whether or not capitalized, entered into or leased for financing purposes;

- ☐ all of our obligations under interest rate and currency swaps, caps, floors, collars, hedge agreements, forward contracts or similar agreements or arrangements;
- ☐ all of our obligations with respect to letters of credit, bankers' acceptances and similar facilities, including reimbursement obligations with respect to the foregoing;
- ☐ all of our obligations issued or assumed as the deferred purchase price of property or services, but excluding trade accounts payable and accrued liabilities arising in the ordinary course of business;
- ☐ all obligations of the type referred to in the above clauses of another person, the payment of which, in either case, we have assumed or guaranteed, for which we are responsible or liable, directly or indirectly, jointly or severally, as obligor, guarantor or otherwise, or which are secured by a lien on our property; and
- ☐ renewals, extensions, modifications, replacements, restatements and refundings of, or any indebtedness or obligation issued in exchange for, any such indebtedness or obligation described in the above clauses of this definition.

"Senior debt" means the principal of, premium, if any, and interest, including all interest accruing subsequent to the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowable as a claim in any such proceeding, and rent payable on or in connection with, and all fees and other amounts payable in connection with, our indebtedness. However, senior debt shall not include:

- ☐ any debt or obligation if its terms or the terms of the instrument under which or pursuant to which it is issued expressly provide that it shall not be senior in right of payment to the subordinated debt securities or expressly provide that such indebtedness is on the same basis or "junior" to the subordinated debt securities; or
- ☐ debt to any of our subsidiaries, a majority of the voting stock of which is owned, directly or indirectly, by us.

"Subsidiary" means a corporation more than 50% of the outstanding voting stock of which is owned, directly or indirectly, by us or by one or more of our other subsidiaries or by a combination of us and our other subsidiaries. For purposes of this definition, "voting stock" means stock or other similar interests which ordinarily has or have voting power for the election of directors, or persons performing similar functions, whether at all times or only so long as no senior class of stock or other interests has or have such voting power by reason of any contingency.

## PLAN OF DISTRIBUTION

We may sell the securities offered through this prospectus (1) to or through underwriters or dealers, (2) directly to purchasers, including our affiliates, (3) through agents, or (4) through a combination of any these methods. The securities may be distributed at a fixed price or prices, which may be changed, market prices prevailing at the time of sale, prices related to the prevailing market prices, or negotiated prices. The prospectus supplement will include the following information:

- ☐ the terms of the offering;
- ☐ the names of any underwriters or agents;
- ☐ the name or names of any managing underwriter or underwriters;
- ☐ the purchase price of the securities;
- ☐ the net proceeds from the sale of the securities;
- ☐ any delayed delivery arrangements;
- ☐ any underwriting discounts, commissions and other items constituting underwriters' compensation;
- ☐ any initial public offering price;
- ☐ any discounts or concessions allowed or reallocated or paid to dealers; and
- ☐ any commissions paid to agents.

### **Sale through underwriters or dealers**

If underwriters are used in the sale, the underwriters will acquire the securities for their own account, including through underwriting, purchase, security lending or repurchase agreements with us. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions. Underwriters may sell the securities in order to facilitate transactions in any of our other securities (described in this prospectus or otherwise), including other public or private transactions and short sales. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise indicated in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers.

If dealers are used in the sale of securities offered through this prospectus, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. The prospectus supplement will include the names of the dealers and the terms of the transaction.

### **Direct sales and sales through agents**

We may sell the securities offered through this prospectus directly. In this case, no underwriters or agents would be involved. Such securities may also be sold through agents designated from time to time. The prospectus supplement will name any agent involved in the offer or sale of the offered securities and will describe any commissions payable to the agent. Unless otherwise indicated in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. The terms of any such sales will be described in the prospectus supplement.

**Underwriter, dealer or agent discounts and commissions**

Underwriters, dealers or agents may receive compensation in the form of discounts, concessions or commissions from us or our purchasers as their agents in connection with the sale of securities. These underwriters, dealers or agents may be considered to be underwriters under the Securities Act. As a result, discounts, commissions, or profits on resale received by the underwriters, dealers or agents may be treated as underwriting discounts and commissions. Each prospectus supplement will identify any such underwriter, dealer or agent, and describe any compensation received by them from us. Any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time. The maximum commission or discount to be received by any underwriter, dealer or agent will not be greater than eight percent (8%) of the maximum gross proceeds of the securities that may be sold under this prospectus.

**Delayed delivery contracts**

If the prospectus supplement indicates, we may authorize agents, underwriters or dealers to solicit offers from certain types of institutions to purchase securities at the public offering price under delayed delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. The contracts would be subject only to those conditions described in the prospectus supplement. The applicable prospectus supplement will describe the commission payable for solicitation of those contracts.

**Market making, stabilization and other transactions**

Unless the applicable prospectus supplement states otherwise, each series of offered securities will be a new issue and will have no established trading market. We may elect to list any series of offered securities on an exchange. Any underwriters that we use in the sale of offered securities may make a market in such securities, but may discontinue such market making at any time without notice. Therefore, we cannot assure you that the securities will have a liquid trading market.

Any underwriter may also engage in stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Rule 104 under the Securities Exchange Act. Stabilizing transactions involve bids to purchase the underlying security in the open market for the purpose of pegging, fixing or maintaining the price of the securities. Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover syndicate short positions.

Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

**Derivative transactions and hedging**

We, the underwriters or other agents may engage in derivative transactions involving the securities. These derivatives may consist of short sale transactions and other hedging activities. The underwriters or agents may acquire a long or short position in the securities, hold or resell securities acquired and purchase options or futures on the securities and other derivative instruments with returns linked to or related to changes in the price of the securities. In order to facilitate these derivative transactions, we may enter into security lending or repurchase agreements with the underwriters or agents. The underwriters or agents may affect the derivative transactions through sales of the securities to the public, including short sales, or by lending the securities in order to facilitate short sale transactions by others. The underwriters or agents may also use the securities purchased or borrowed from us or others (or, in the case of derivatives, securities received from us in settlement of those derivatives) to directly or indirectly settle sales of the securities or close out any related open borrowings of the securities.

**Electronic auctions**

We may also make sales through the Internet or through other electronic means. Since we may from time to

time elect to offer securities directly to the public, with or without the involvement of agents, underwriters or dealers, while utilizing the Internet or other forms of electronic bidding or ordering systems for the pricing and allocation of such securities, you should pay particular attention to the description of that system we will provide in a prospectus supplement.

Such electronic system may allow bidders to directly participate, through electronic access to an auction site, by submitting conditional offers to buy that are subject to acceptance by us, and which may directly affect the price or other terms and conditions at which such securities are sold. These bidding or ordering systems may present to each bidder, on a so-called “real-time” basis, relevant information to assist in making a bid, such as the clearing spread at which the offering would be sold, based on the bids submitted, and whether a bidder’s individual bids would be accepted, prorated or rejected. For example, in the case of a debt security, the clearing spread could be indicated as a number of “basis points” above an index treasury note. Of course, many pricing methods can and may also be used.

Upon completion of such an electronic auction process, securities will be allocated based on prices bid, terms of bid or other factors. The final offering price at which securities would be sold and the allocation of securities among bidders would be based in whole or in part on the results of the Internet or other electronic bidding process or auction.

#### **General information**

Agents, underwriters, and dealers may be entitled, under agreements entered into with us, to indemnification by us against certain liabilities, including liabilities under the Securities Act.

## **LEGAL MATTERS**

The validity of the securities offered by this prospectus will be passed upon by Morrison & Foerster LLP, San Francisco, California.

## **EXPERTS**

The financial statements of Cassava Sciences, Inc. appearing in its Annual Report (Form 10-K) for the year ended December 31, 2019 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such financial statements as of December 31, 2019 have been incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

## **WHERE YOU CAN FIND MORE INFORMATION**

We file annual, quarterly and other 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>. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can also be accessed free of charge through the Internet. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information contained on our website is not part of this prospectus.

## INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus certain information we file with it, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus and any accompanying prospectus supplement. We incorporate by reference the documents listed below that we have previously filed with the SEC (excluding any portions of any Form 8-K that are not deemed “filed” pursuant to the General Instructions of Form 8-K):

- ☐ our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed on March 26, 2020; and
- ☐ the description of our common stock contained in our Registration Statement on Form 8-A as filed with the SEC on March 15, 2000, and any further amendment or report filed hereafter for the purpose of updating such description pursuant to Section 12(b) of the Exchange Act.

We also incorporate by reference into this prospectus additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the completion or termination of the offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information deemed furnished and not filed with the SEC. Any statements contained in a previously filed document incorporated by reference into this prospectus is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, or in a subsequently filed document also incorporated by reference herein, modifies or supersedes that statement.

You may request a copy of these filings, at no cost to you, by telephoning us at (512) 501-2444 or by writing us at the following address:

Cassava Sciences, Inc.  
7801 N Capital of Texas Highway, Suite 260  
Austin, TX 78731  
United States of America  
Attn: Investor Relations

**The information in this prospectus supplement is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus supplement is not an offer to sell these securities, and we are not soliciting offers to buy these securities, in any state or other jurisdiction where the offer or sale is not permitted.**

**SUBJECT TO COMPLETION, DATED MARCH 27, 2020**

**PROSPECTUS SUPPLEMENT**



**Cassava Sciences, Inc.**

**Up to \$100,000,000 of Shares**

**Common Stock**

On March 27, 2020, we entered into a sales agreement with SVB Leerink LLC, or the Agent, relating to the shares of our common stock, par value \$0.001 per share, offered by this prospectus. In accordance with the terms of the sales agreement, we may offer and sell up to \$100,000,000 of our common stock from time to time through or to the Agent, as sales agent or principal, by any method deemed to be an “at the market offering” as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, or the Securities Act.

Our common stock is listed on the Nasdaq Capital Market under the symbol “SAVA.” The last sale price of our common stock on March 20, 2020, as reported by the Nasdaq Capital Market, was \$3.87 per share.

There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

We will pay the Agent an amount equal to 3.0% of the aggregate sales price received by the Agent from each sale of shares sold through it acting as our sales agent. Subject to the terms and conditions of the sales agreement, the Agent will use its commercially reasonable efforts to sell on our behalf any shares of common stock to be offered by us under the sales agreement.

In connection with the sale of common stock on our behalf, the Agent will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation to the Agent will be deemed to be an underwriting commission or discount. We have also agreed to provide indemnification and contribution to the Agent with respect to certain liabilities, including liabilities under the Securities Act.

Investing in our common stock involves risks. See “Risk Factors” beginning on page S-5 of this prospectus supplement and page 4 of the accompanying prospectus, and the risks set forth under the caption “Item 1A. Risk Factors” included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 and in the documents that are incorporated by reference into this prospectus.

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

**SVB Leerink**

The date of this prospectus supplement is \_\_\_\_\_, 2020.

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This prospectus supplement describes the terms of this offering and adds to and updates information contained in the accompanying prospectus. The accompanying prospectus provides more general information, some of which may not apply to this offering. Generally, when we refer to this prospectus, we are referring to this prospectus supplement and the accompanying prospectus combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus, on the other hand, you should rely on the information contained in this prospectus supplement.

You should rely only on the information contained or incorporated by reference in this prospectus. We have not, and the Agent has not, authorized anyone to provide additional information or information different from that contained or incorporated by reference in this prospectus. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this prospectus in any jurisdiction where it is unlawful to make such offer or solicitation. Neither the delivery of this prospectus nor the sale of shares of common stock means that information contained or incorporated by reference in this prospectus is correct after its respective dates. These documents do not constitute an offer to sell or solicitation of any offer to buy these shares of common stock in any circumstances under which the offer or solicitation is unlawful.

Unless otherwise expressly stated or the context otherwise requires, references in this prospectus to “Cassava Sciences,” “we,” “us,” “our” or “the company” are to Cassava Sciences, Inc.

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## STATEMENT REGARDING FORWARD-LOOKING INFORMATION

This prospectus and the documents incorporated by reference in this prospectus include statements about future events and expectations that constitute forward-looking statements. Such forward-looking statements include, without limitation, statements concerning regulatory filings, development activity and capital expenditures, and capital raising activities. Words such as “expects,” “anticipates,” “intends,” “plans,” “believes,” “seeks,” “estimates,” and variations of such words and similar expressions are intended to identify such forward-looking statements. Such statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from the results of operations or plans expressed or implied by such forward-looking statements. Such factors include, among other things, unanticipated adverse business developments and adverse changes in general and local economies and business conditions. Although we believe that the assumptions underlying such forward-looking statements are reasonable, any of the assumptions could be inaccurate, and therefore such statements may not prove to be accurate. In light of the significant uncertainties inherent in the forward-looking statements included herein, the inclusion of such information should not be regarded as a representation by us or any other person that the results or conditions described in such statements or our objectives and plans will be achieved.

The following factors, among others, could cause our future results to differ materially from those expressed in the forward-looking statements:

- Our ability to initiate, conduct or analyze clinical studies with PTI-125 or PTI-125Dx, our lead product candidates targeted at Alzheimer’s disease and other neurodegenerative diseases;
- our estimated timeline for announcing top-line results of a Phase 2b study of PTI-125;
- our estimated timeline for testing clinical samples with PTI-125Dx, our investigational blood-based diagnostic;
- the beneficial characteristics, safety, efficacy, and therapeutic effects of our product candidates, such as PTI-125 or PTI-125Dx;
- the utility of protection, or the sufficiency, of our intellectual property;
- our potential competitors or competitive products;
- expected future sources of revenue and capital and increasing cash needs;
- our continued reliance on third parties to conduct additional clinical trials of our product candidates, and for the manufacture of our product candidates;
- expectations regarding trade secrets, technological innovations, licensing agreements and outsourcing of certain business functions;
- our expenses increasing or fluctuations in our financial or operating results;
- our operating losses and anticipated operating and capital expenditures;
- expectations regarding the issuance of shares of common stock to employees pursuant to equity compensation awards, net of employment taxes;
- our ability to maintain compliance with the ongoing listing requirements for the Nasdaq Capital Market;
- the development and maintenance of our internal systems and infrastructure;

- our need to hire additional personnel and our ability to attract and retain such personnel;
- existing regulations and regulatory developments in the United States and other jurisdictions;
- the sufficiency of our current resources to continue to fund our operations;
- the accuracy of our estimates regarding expenses, capital requirements, and needs for additional financing; and
- assumptions and estimates used for our disclosures regarding stock-based compensation.

Such forward-looking statements involve risks and uncertainties, including, but not limited to, those risks and uncertainties relating to:

- difficulties or delays in development, testing, pre-clinical studies, clinical trials (including patient enrollment), regulatory authorization or approval, manufacturing and commercialization of our drug candidates;
- unexpected adverse side effects or inadequate therapeutic efficacy of our drug candidates that could slow or prevent product approval (including the risk that current and past results of clinical trials are not indicative of future results of clinical trials) or potential post-approval market acceptance;
- significant issues that may arise related to outsourcing of pre-clinical studies, clinical trials, and formation and manufacturing activities;
- discussions with potential strategic partners for the development and commercialization of PTI-125 and PTI-125Dx;
- the successful development of other drug candidates, independently as well as pursuant to our other collaboration agreements, and the continuation of such agreements;
- the uncertainty of protection of our intellectual property rights or trade secrets;
- potential infringement of the intellectual property rights of third parties;
- pursuing in-license and acquisition opportunities;
- maintenance or third party funding of our collaboration and license agreements;
- legislation or regulatory actions affecting product pricing, reimbursement or access;
- significant breakdown or interruption of our information technology and infrastructure;
- hiring and retaining personnel; and
- our financial position and our ability to obtain additional financing if necessary.

Please also refer to the section entitled “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 for further information on these and other risks affecting us.

We caution you not to place undue reliance on forward-looking statements because our future results may differ materially from those expressed or implied by them. We do not intend to update any forward-looking statement, whether written or oral, relating to the matters discussed in this prospectus, except as required by law.

*This summary highlights information contained elsewhere in this prospectus or incorporated by reference in this prospectus. This summary does not contain all of the information that you should consider before making an investment decision. Before making an investment decision, you should read carefully in its entirety this prospectus, including the matters discussed in “Risk Factors” in this prospectus and our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as such risk factors may be amended, updated or modified periodically in our reports filed with the SEC and the financial data and related notes and the reports incorporated by reference in this prospectus.*

### **Company Overview**

Cassava Sciences, Inc. is a clinical stage biotechnology company. Our mission is to detect and treat neurodegenerative diseases, such as Alzheimer’s disease. Our novel science is based on stabilizing – but not removing – a critical protein in the brain.

Over the past 10 years, we have combined state-of-the-art technology with new insights in neurobiology to develop novel solutions for Alzheimer’s disease and other neurodegenerative diseases. Our strategy is to leverage our unique scientific/clinical platform to develop a first-in-class program for treating neurodegenerative diseases, such as Alzheimer’s.

We currently have two clinical-stage biopharmaceutical assets under development:

- our lead therapeutic product candidate, called PTI-125, for the treatment of Alzheimer’s disease; and
- our lead investigational diagnostic product candidate, called PTI-125Dx, to detect Alzheimer’s disease from a small sample of blood, possibly years before the overt appearance of clinical symptoms.

Our scientific approach for the treatment of Alzheimer’s disease seeks to simultaneously improve both neurodegeneration and neuroinflammation. We believe our ability to improve multiple vital functions in the brain represents a new, different and crucial approach to address Alzheimer’s disease.

### **Corporate Information**

We were incorporated in Delaware in May 1998. Our principal executive offices are located at 7801 N Capital of Texas Highway, Suite 260, Austin, TX, 78731 and our telephone number at that address is (512) 501-2444.

Additional information regarding our company is set forth in documents on file with the SEC and incorporated by reference in this prospectus, as described below under the sections entitled “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference.”

## The Offering

Issuer	Cassava Sciences, Inc., a Delaware corporation.
Common stock offered	Up to \$100 million of our common stock, par value \$0.001 per share.
Common stock to be outstanding immediately after this offering <sup>(1)</sup>	Up to 47,681,603 shares, assuming sales of 25,839,793 shares of our common stock in this offering at an offering price of \$3.87 per share, which was the last reported sale price of our common stock on the Nasdaq Capital Market on March 20, 2020. The actual number of shares issued will vary depending on how many shares of our common stock we choose to sell and the prices at which such sales occur.
Plan of Distribution	“At the market offering” that may be made from time to time on the Nasdaq Capital Market or other existing trading market for our common stock through or to the Agent, as sales agent or principal. See “Plan of Distribution”.
Use of Proceeds	We intend to use the net proceeds, if any, from the sale of the shares that we may offer under this prospectus, after deducting commissions and estimated offering expenses, for general corporate purposes and working capital requirements. We may also use a portion of the net proceeds for licensing or acquiring intellectual property or technologies to incorporate into our products and product candidates or our research and development programs, capital expenditures, to fund possible investments in and acquisitions of complementary businesses or partnerships. Pending their ultimate use, we intend to invest the net proceeds in a variety of securities, including commercial paper, government and non-government debt securities and/or money market funds that invest in such securities. See “Use of Proceeds.”
Risk Factors	Before deciding to invest in shares of our common stock, you should read carefully the risks set forth under the caption “Risk Factors” beginning on page S-5 of this prospectus supplement and page 4 of the accompanying prospectus, and the risks set forth under the caption “Item 1A. Risk Factors” included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 and in the documents that are incorporated by reference into this prospectus for certain considerations relevant to an investment in our common stock.
Nasdaq Capital Market symbol	SAVA
Transfer agent and registrar	Computershare Shareowner Services LLC

(1) Based on 21,841,810 shares of our common stock outstanding as of December 31, 2019, and excludes, as of that date, the following:

- 4,504,091 shares of common stock issuable upon exercise of outstanding warrants having a weighted-average exercise price of \$1.25 per share;
- 3,210,965 shares of common stock issuable upon exercise of outstanding options having a weighted-average exercise price of \$12.27 per share;

- 138,055 shares of common stock issuable upon the vesting and settlement of outstanding restricted stock units;
- 277,500 shares of common stock reserved for issuance and available for future grant under our 2018 Omnibus Incentive Plan; and
- 58,017 shares of common stock reserved for issuance and available for future grant under our Employee Stock Purchase Plan.

## RISK FACTORS

*An investment in our common stock is subject to risk. Our business, financial condition, and results of operations could be materially adversely affected by any of these risks. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment. Before you decide to invest in our common stock, you should carefully consider the risks described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as such risks may be amended, updated or modified periodically in our reports filed with the SEC, as well as the other information included in and incorporated by reference in this prospectus.*

### **A substantial number of shares may be sold in the market following this offering, which may depress the market price for our common stock.**

Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. Although there can be no assurance that any of the \$100,000,000 of shares being offered under this prospectus will be sold or the price at which any such shares might be sold, assuming that an aggregate of 25,839,793 shares of our common stock are sold during the term of the sales agreement with SVB Leerink LLC, at a price of \$3.87 per share, the last reported sale price of our common stock on the Nasdaq Capital Market on March 20, 2020, upon completion of this offering, based on our shares outstanding as of December 31, 2019, we will have outstanding an aggregate of 47,681,603 shares of common stock, assuming no exercise of outstanding warrants or stock options and no purchases of stock under our employee stock purchase plan. A substantial majority of the outstanding shares of our common stock are, and all of the shares sold in this offering upon issuance will be, freely tradable without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, unless these shares are owned or purchased by “affiliates” as that term is defined in Rule 144 under the Securities Act.

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

Our management has broad discretion in the application of the net proceeds from this offering, and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Our management could spend the net proceeds from this offering 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 have a material adverse effect on our business, cause the price of our common stock to decline and 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 that loses value.

### **If you purchase shares of common stock sold in this offering, you will incur immediate and substantial dilution.**

If you purchase shares of our common stock in this offering, you will experience substantial and immediate dilution in the pro forma net tangible book value per share after giving effect to this offering, based on the assumed public offering price of \$3.87 per share, which is the last reported sale price of our common stock on The Nasdaq Capital Market on March 20, 2020, because the price that you pay will be substantially greater than the pro forma net tangible book value per share of the common stock that you acquire. This dilution in pro forma net tangible book value is due in large part to the fact that certain of our earlier investors paid substantially less than the offering price when they purchased shares of our capital stock. For more information, see “Dilution.”

### **You may experience future dilution as a result of future equity offerings or other equity issuances.**

In order to raise additional capital, we may in the future offer and issue additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering. In addition, we have also registered all of the shares of

common stock that we may issue under our stock option and employee stock purchase plans, and as of December 31, 2019, 3,210,965 shares of common stock were issuable upon the exercise of stock options outstanding under our stock option plans at a weighted average exercise price of \$12.27 per share, 277,500 additional shares of common stock were reserved for potential future issuance under our stock option plan, and an aggregate of 58,017 shares of common stock were reserved for potential future issuance under our 2000 Employee Stock Purchase Plan. Further, our Board of Directors has approved, and also recommended approval by our stockholders at the 2020 Annual Meeting of Stockholders to be held on May 7, 2020, an increase of 2,000,000 shares available for issuance under our stock option plan. You will incur dilution upon the grant of any shares pursuant to such plan, upon vesting of any stock awards under any such plan, or upon exercise of any such outstanding options or warrants.

#### **USE OF PROCEEDS**

We intend to use the net proceeds, if any, from the sale of the shares that we may offer under this prospectus, after deducting commissions and estimated offering expenses, for general corporate purposes and working capital requirements. We may also use a portion of the net proceeds for licensing or acquiring intellectual property or technologies to incorporate into our products and product candidates or our research and development programs, capital expenditures, to fund possible investments in and acquisitions of complementary businesses or partnerships. We have not determined the amounts we plan to spend on the areas listed above or the timing of these expenditures, and we have no current plans with respect to acquisitions as of the date of this prospectus. As a result, our management will have broad discretion to allocate the net proceeds from the sale of the shares that we may offer under this prospectus. Pending their ultimate use, we intend to invest the net proceeds in a variety of securities, including commercial paper, government and non-government debt securities and/or money market funds that invest in such securities.



## DILUTION

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

Net tangible book value per share is determined by subtracting our total liabilities from our total tangible assets, which is total assets less intangible assets, and dividing this amount by the number of shares of common stock outstanding. The historical net tangible book value of our common stock, as of December 31, 2019, was approximately \$22.1 million, or \$1.01 per share, based on 21,841,810 shares of our common stock outstanding as of December 31, 2019 as reported in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of shares of common stock in this offering at an assumed offering price of \$3.87 per share, and after deducting estimated commissions and offering expenses payable by us, our as adjusted net tangible book value at December 31, 2019 would have been approximately \$118.9 million, or \$2.49 per share. This represents an immediate dilution of \$1.38 per share to new investors purchasing shares of common stock in this offering. The following table illustrates this dilution:

Assumed offering price per share	\$ 3.87
Net tangible book value per share as of December 31, 2019	\$ 1.01
Increase in net tangible book value per share attributable to investors participating in this offering	\$ 1.48
As adjusted net tangible book value per share after giving effect to this offering	\$ 2.49
As adjusted dilution per share to investors participating in this offering	\$ 1.38

The above illustration of dilution per share to investors participating in this offering assumes no exercise of outstanding options to purchase our common stock or outstanding warrants to purchase shares of our common stock. To the extent that any of these outstanding warrants or options are exercised or we issue additional shares under our equity incentive plans, there will be further dilution to new investors. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our shareholders.

The above discussion and table are based on 21,841,810 shares of our common stock outstanding as of December 31, 2019 and excludes, as of that date, the following:

- 4,504,091 shares of common stock issuable upon exercise of outstanding warrants having a weighted-average exercise price of \$1.25 per share;
- 3,210,965 shares of common stock issuable upon exercise of outstanding options having a weighted-average exercise price of \$12.27 per share;
- 138,055 shares of common stock issuable upon the vesting and settlement of outstanding restricted stock units;

- 277,500 shares of common stock reserved for issuance and available for future grant under our 2018 Omnibus Incentive Plan; and
- 58,017 shares of common stock reserved for issuance and available for future grant under our Employee Stock Purchase Plan.

## PRICE RANGE OF OUR COMMON STOCK

Our common stock has been traded on the Nasdaq Capital Market under the symbol “SAVA” since March 28, 2019, and previously traded under the symbol “PTIE”. The following table sets forth, for the periods indicated, the high and low sales prices for our common stock as reported by the Nasdaq Capital Market.

	Common Stock Price	
	Low	High
<b>Year ended December 31, 2018</b>		
First Quarter	\$ 3.88	\$ 12.80
Second Quarter	2.04	10.87
Third Quarter	0.81	2.92
Fourth Quarter	0.76	2.99
<b>Year ended December 31, 2019</b>		
First Quarter	\$ 0.84	1.37
Second Quarter	1.00	1.40
Third Quarter	1.03	1.49
Fourth Quarter	1.05	7.20
<b>Year ending December 31, 2020</b>		
First Quarter (through March 20, 2020)	\$ 3.10	10.95

The closing sale price of our common stock as reported on the Nasdaq Capital Market on March 20, 2020 was \$3.87 per share. As of that date there were approximately 33 holders of record of the common stock. This does not include the number of persons whose stock is in nominee or “street name” accounts through brokers. The market price of our common stock has been and may continue to be subject to wide fluctuations in response to a number of events and factors, such as progress in our development programs, quarterly variations in our operating results, announcements of technological innovations or new products by us or our competitors, changes in financial estimates and recommendations by securities analysts, the operating and stock performance of other companies that investors may deem comparable to us, and news reports relating to trends in our markets. These fluctuations, as well as general economic and market conditions, may adversely affect the market price for our common stock.

We have entered into a sales agreement with the Agent under which we may issue and sell from time to time shares of our common stock through the Agent, acting as sales agent or principal. Sales of the shares to which this prospectus relates, if any, will be made by any method deemed to be an “at the market offering” as defined in Rule 415 promulgated under the Securities Act. As our sales agent, the Agent will not engage in any transactions that stabilize our common stock.

The Agent will offer the shares of our common stock subject to the terms and conditions of the sales agreement on a daily basis or as otherwise agreed upon by us and the Agent. We will designate the maximum number of shares or dollar value of common stock to be sold through the Agent on a daily basis or otherwise determine such maximum number together with the Agent. Subject to the terms and conditions of the sales agreement, the Agent will use its commercially reasonable efforts to sell on our behalf all of the shares of common stock so designated or determined. We may instruct the Agent not to sell shares of common stock if the sales cannot be effected at or above the price designated by us in any such instruction. We or the Agent may suspend the offering of shares of common stock being made through the Agent under the sales agreement upon proper notice to the other party.

For its service as sales agent in connection with the sale of shares of our common stock that may be offered hereby, we will pay the Agent an amount equal to 3.0% of the aggregate sales price received by the Agent from each sale of shares sold through it acting as our sales agent. The remaining sales proceeds, after deducting any expenses payable by us and any transaction fees imposed by any governmental, regulatory, or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of such shares. We have also agreed to reimburse the Agent for certain specified expenses, including the fees and disbursements of its legal counsel in an amount not to exceed \$50,000, as provided in the sales agreement.

The Agent will provide written confirmation to us following the close of trading on the Nasdaq Capital Market each day in which shares of common stock are sold by it for us under the sales agreement. Each confirmation will include the number of shares sold on that day, the gross sales price per share, the compensation payable by us to the Agent and the proceeds to us net of such compensation.

Settlement for sales of common stock will occur, unless the parties agree otherwise, on the second business day following the date on which any sales were made in return for payment of the proceeds to us net of compensation paid by us to the Agent. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will deliver to the Nasdaq Capital Market copies of this prospectus pursuant to the rules of the Nasdaq Capital Market. Unless otherwise required, we will report at least quarterly the number of shares of common stock sold through the Agent under the sales agreement, the net proceeds to us and the compensation paid by us to the Agent in connection with the sales of common stock.

In connection with the sale of the common stock on our behalf, the Agent will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation paid to the Agent will be deemed to be underwriting commissions or discounts. We have agreed in the sales agreement to provide indemnification and contribution to the Agent against certain civil liabilities, including liabilities under the Securities Act.

In the ordinary course of their business, the Agent and/or its affiliates may perform, investment banking, broker dealer, lending, financial advisory or other services for us for which they have received, or may receive, separate fees.

We estimate that the total expenses of the offering payable by us, excluding discounts and commissions payable to the Agent under the sales agreement, will be approximately \$180,000.

The offering of common stock pursuant to the sales agreement will terminate upon the earlier of (1) the sale of all of our shares of common stock provided for in the sales agreement or (2) the termination of the sales agreement, pursuant to its terms, by either the Agent or us.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and other 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>. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, can also be accessed free of charge through the Internet. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

We maintain a web site at [www.cassavasciences.com](http://www.cassavasciences.com). Information contained on our website is not part of this prospectus or any other document we file with or furnish to the SEC.

## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus certain information we file with it, which means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus. We incorporate by reference the documents listed below that we have previously filed with the SEC (excluding any portions of any Form 8-K that are not deemed "filed" pursuant to the General Instructions of Form 8-K):

- ☐ our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed on March 26, 2020; and
- ☐ the description of our common stock contained in our Registration Statement on Form 8-A as filed with the SEC on March 15, 2000, and any further amendment or report filed hereafter for the purpose of updating such description pursuant to Section 12(b) of the Exchange Act.

We also incorporate by reference into this prospectus additional documents that we may file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the completion or termination of the offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information deemed furnished and not filed with the SEC. Any statements contained in a previously filed document incorporated by reference into this prospectus is deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, or in a subsequently filed document also incorporated by reference herein, modifies or supersedes that statement.

As explained above in "Where You Can Find More Information," these incorporated documents (as well as other documents filed by us under the Exchange Act) are available at the SEC and may be accessed in a number of ways, including online via the Internet.

You may request a copy of any of the documents described above, at no cost to you, by telephoning us at (512) 501-2444 or by writing us at the following address:

Cassava Sciences, Inc.  
7801 N Capital of Texas Highway, Suite 260  
Austin, TX 78731  
United States of America  
Attn: Investor Relations

## **LEGAL MATTERS**

Certain legal matters in connection with this offering will be passed upon for us by Morrison & Foerster LLP, San Francisco, California. Certain legal matters in connection with this offering will be passed upon for the Agent by Duane Morris LLP, New York, New York.

## **EXPERTS**

The financial statements of Cassava Sciences, Inc. appearing in its Annual Report (Form 10-K) for the year ended December 31, 2019 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such financial statements as of December 31, 2019 have been incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

**\$100,000,000**



**Common Stock**

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**PROSPECTUS SUPPLEMENT**

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**SVB Leerink**

, 2020

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## Information Not Required in the Prospectus

**Item 14. Other Expenses of Issuance and Distribution**

The aggregate estimated (other than the registration fee and FINRA filing fee) expenses which will be paid or have been paid by the Company in connection with a distribution of securities registered hereby are as follows:

Securities and Exchange Commission registration fee	\$	25,960
FINRA filing fee		30,500
Accounting fees and expenses		20,000
Legal fees and expenses		85,000
Printing expenses		10,000
Transfer agent fees and expenses		5,000
Miscellaneous		3,540
Total	\$	<u>180,000</u>

**Item 15. Indemnification of Directors and Officers**

Our amended and restated certificate of incorporation contains provisions that eliminate, to the maximum extent permitted by the General Corporation Law of the State of Delaware, the personal liability of directors and executive officers for monetary damages for breach of their fiduciary duties as a director or officer. Our amended and restated certificate of incorporation and bylaws provide that we shall indemnify our directors and executive officers and may indemnify our employees and other agents to the fullest extent permitted by the General Corporation Law of the State of Delaware.

Sections 145 and 102(b)(7) of the General Corporation Law of the State of Delaware provide that a corporation may indemnify any person made a party to an action by reason of the fact that he or she was a director, executive officer, employee or agent of the corporation or is or was serving at the request of the corporation against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of an action by or in right of the corporation, no indemnification may generally be made in respect of any claim as to which such person is adjudged to be liable to the corporation.

We have entered into indemnification agreements with our directors and executive officers, in addition to the indemnification provided for in our amended and restated certificate of incorporation and bylaws, and intend to enter into indemnification agreements with any new directors and executive officers in the future.

We have purchased and intend to maintain insurance on behalf of any person who is or was a director or officer of our company 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.

See also the undertakings set out in our response to Item 17 herein.



**Item 16.Exhibits**

The following exhibits are filed herewith or incorporated by reference herein:

Exhibit No.	Description	Incorporated by Reference		Exhibit No.	Filed Herewith
		Form	Filing Date		
<a href="#">1.1</a>	<a href="#">Sales Agreement, dated March 27, 2020, by and between the Company and SVB Leerlink LLC.</a>				X
1.2	* Form of Underwriting Agreement				
<a href="#">3.1</a>	<a href="#">Amended and Restated Certificate of Incorporation.</a>	10-Q	7/29/2005	3.1	
<a href="#">3.2</a>	<a href="#">Certificate of Amendment of Amended and Restated Certificate of Incorporation.</a>	8-K	5/8/2017	3.1	
<a href="#">3.3</a>	<a href="#">Certificate of Amendment of Amended and Restated Certificate of Incorporation.</a>	10-K	3/29/2019	3.3	
<a href="#">3.4</a>	<a href="#">Amended and Restated Bylaws.</a>	10-K	3/29/2019	3.4	
<a href="#">4.1</a>	<a href="#">Form of Senior Indenture</a>				X
<a href="#">4.2</a>	<a href="#">Form of Subordinated Indenture</a>				X
<a href="#">4.3</a>	<a href="#">Form of Senior Debt Security (included in Exhibit 4.1)</a>				X
<a href="#">4.4</a>	<a href="#">Form of Subordinated Debt Security (included in Exhibit 4.2)</a>				X
4.5	* Form of Certificate of Designation				
4.6	* Form of Preferred Stock Certificate				
4.7	* Form of Deposit Agreement				
4.8	* Form of Depositary Receipt (included in Exhibit 4.7)				
4.9	* Form of Warrant Agreement				
4.10	* Form of Warrant Certificate				
<a href="#">5.1</a>	<a href="#">Opinion of Morrison &amp; Foerster LLP</a>				X
<a href="#">23.1</a>	<a href="#">Consent of Independent Registered Public Accounting Firm</a>				X
<a href="#">23.2</a>	<a href="#">Consent of Morrison &amp; Foerster LLP (included in Exhibit 5.1)</a>				X
<a href="#">24.1</a>	<a href="#">Power of Attorney (contained here on the signature page)</a>				X
25.1	* Form T-1 Statement of Eligibility of Trustee for Senior Indenture under the Trust Indenture Act of 1939*				
25.2	* Form T-1 Statement of Eligibility of Trustee for Subordinated Indenture under the Trust Indenture Act of 1939*				

\* To be filed by amendment or as an exhibit to a report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and incorporated herein by reference.

## Item 17.Undertakings

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

- (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
- (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC 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 Registration Fee" table in the effective registration statement; and
- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

*provided, however*, that paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) If the registrant is relying on Rule 430B,

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of

the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to the effective date; or

(ii) If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *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 first use, 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 date of first use.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, 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 and sell such securities to such purchaser:

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

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 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 of 1933 and will be governed by the final adjudication of such issue.

(d) The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(e) The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the SEC under Section 305(b)(2) of the Trust Indenture Act.

## Signatures

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement on Form S-3 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Austin, State of Texas, on the 27th day of March, 2020.

CASSAVA SCIENCES, INC.

By: /s/ REMI BARBIER

Remi Barbier  
President, Chief Executive Officer and  
Chairman of the Board of Directors

## Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Remi Barbier and Eric Schoen as his or her true and lawful attorneys-in-fact and agents with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities to sign the Registration Statement filed herewith and any or all amendments to said Registration Statement (including post-effective amendments and registration statements filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and otherwise), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission granting unto said attorneys-in-fact and agents the full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the foregoing, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or her substitute, may lawfully do or cause to be done by virtue thereof.

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

Signature	Title	Date
<u>/s/ REMI BARBIER</u> Remi Barbier	President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	March 27, 2020
<u>/s/ ERIC J. SCHOEN</u> Eric J. Schoen	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 27, 2020
<u>/s/ NADAV FRIEDMANN, PH.D., M.D.</u> Nadav Friedmann, Ph.D., M.D.	Chief Operating and Medical Officer and Director	March 27, 2020
<u>/s/ ROBERT Z. GUSSIN, PH.D.</u> Robert Z. Gussin, Ph.D.	Director	March 27, 2020
<u>/s/ MICHAEL J. O'DONNELL, ESQ.</u> Michael J. O'Donnell, Esq.	Director	March 27, 2020
<u>/s/ SAIRA RAMASASTRY</u> Saira Ramasastry	Director	March 27, 2020
<u>/s/ SANFORD R. ROBERTSON</u> Sanford R. Robertson	Director	March 27, 2020
<u>/s/ PATRICK SCANNON, M.D., PH.D.</u> Patrick Scannon, M.D., Ph.D.	Director	March 27, 2020

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CASSAVA SCIENCES, INC.  
Common Stock  
(\$0.001 par value per share)

Sales Agreement

March 27, 2020

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

Ladies and Gentlemen:

Cassava Sciences, Inc. a Delaware corporation (the “Company”), confirms its agreement (this “Agreement”) with SVB Leerink LLC (the “Agent”), as follows:

1. Issuance and Sale of Shares. The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell through or to the Agent, as sales agent or principal, shares (the “Placement Shares”) of common stock of the Company, \$0.001 par value per share (the “Common Stock”), *provided however*, that in no event shall the Company issue or sell through Agent, Placement Shares for an aggregate gross sales proceeds that would exceed (a) the dollar amount of shares of Common Stock registered on the Registration Statement (as defined below), (b) the number of authorized but unissued shares of Common Stock, or (c) dollar amount of shares of Common Stock permitted to be sold under Form S-3, including General Instruction I.B.6 of Form S-3, or (iv) the dollar amount of shares of Common Stock for which the Company has filed a Prospectus (as defined below) (the least of (i), (ii), (iii) and (iv), the “Maximum Amount”). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitations set forth in this Section 1 on the amount of Placement Shares issued and sold under this Agreement shall be the sole responsibility of the Company and that Agent shall have no obligation in connection with such compliance. The issuance and sale of Placement Shares through Agent will be effected pursuant to the Registration Statement (as defined below) to be filed by the Company and to be declared effective by the Securities and Exchange Commission (the “Commission”), although nothing in this Agreement shall be construed as requiring the Company to use the Registration Statement to issue Common Stock.

The Company has prepared and will file, in accordance with the provisions of the Securities Act of 1933, as amended (the “Securities Act”) and the rules and regulations thereunder (the “Securities Act Regulations”), with the Commission a registration statement on Form S-3, including a base prospectus, relating to certain securities, including the Placement Shares to be issued from time to time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the rules and regulations thereunder (the “Exchange Act Regulations”). The Company has prepared a prospectus specifically relating to the Placement Shares (the “ATM Prospectus”) to the base prospectus included as part of such registration statement, and shall, if necessary, prepare a prospectus supplement specifically relating to the Placement Shares (the “Prospectus Supplement”) to the base prospectus included as part of such registration statement. The Company will furnish to the Agent, for use by the Agent, copies of the base prospectus and the ATM Prospectus included as part of such registration statement, as supplemented by the Prospectus Supplement, if any, relating to the Placement Shares. Except where the context otherwise requires, such registration statement, and any post-effective

amendment thereto, including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) (as defined below) or deemed to be a part of such registration statement pursuant to Rule 430B (as defined below), or any subsequent registration statement on Form S-3 filed pursuant to Rule 415(a)(6) under the Securities Act by the Company to cover any Placement Shares is herein called the “Registration Statement.” The base prospectus, including all documents incorporated therein by reference, included in the Registration Statement, as it may be supplemented by the ATM Prospectus and Prospectus Supplement, if any, in the form in which such prospectus, ATM Prospectus and/or Prospectus Supplement have most recently been filed by the Company with the Commission pursuant to Rule 424(b), together with any then issued Issuer Free Writing Prospectus (defined below), is herein called the “Prospectus.” Any reference herein to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to refer to and include the documents incorporated by reference therein, and any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include the filing after the execution hereof of any document with the Commission deemed to be incorporated by reference therein.

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

2. Placements. Each time that the Company wishes to issue and sell Placement Shares hereunder (each, a “Placement”), it will notify the Agent by email notice (or other method mutually agreed to in writing by the Parties) of the number of Placement Shares, the time period during which sales are requested to be made, any limitation on the number of Placement Shares that may be sold in any one day and any minimum price below which sales may not be made (a “Placement Notice”), the form of which is attached hereto as Schedule 1. The Placement Notice shall originate from any of the individuals from the Company set forth on Schedule 3 (with a copy to each of the other individuals from the Company listed on such schedule), and shall be addressed to each of the individuals from the Agent set forth on Schedule 3, as such Schedule 3 may be amended from time to time. The Placement Notice shall be effective unless and until (i) the Agent declines to accept the terms contained therein for any reason, in its sole discretion, (ii) the entire amount of the Placement Shares thereunder have been sold, (iii) the Company suspends or terminates the Placement Notice or (iv) the Agreement has been terminated under the provisions of Section 12. The amount of any discount, commission or other compensation to be paid by the Company to Agent in connection with the sale of the Placement Shares shall be calculated in accordance with the terms set forth in Schedule 2. It is expressly acknowledged and agreed that neither the Company nor the Agent will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to the Agent and the Agent does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control.

3. Sale of Placement Shares by Agent. Subject to the provisions of Section 5(a), the Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of the NASDAQ Capital Market (the “Exchange”), to sell the Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. The Agent will provide written confirmation to the Company no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number of Placement Shares sold on such day, the compensation payable by the Company to the Agent pursuant to Section 2 with respect to such sales, and the Net Proceeds (as defined below) payable to the Company, with an itemization of the deductions made by the Agent (as set forth in Section 5(b)) from the gross proceeds that it receives from such sales. Subject to the terms of the Placement Notice, the Agent may sell Placement Shares by any method permitted by law deemed to be an “at the market offering” as defined in Rule 415 (as defined below).

4. Suspension of Sales. The Company or the Agent may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on Schedule 3, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individuals of the other party set forth on Schedule 3), suspend any sale of Placement Shares; provided, however, that such suspension shall not affect or impair any party’s obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. Each party agrees that no such notice under this Section 4 shall be effective against any other party unless it is made to one of the individuals named on Schedule 3, as such Schedule may be amended from time to time.

5. Sale and Delivery to the Agent; Settlement.

(a) Sale of Placement Shares. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, upon the Agent’s acceptance of the terms of a Placement Notice, and unless the sale of the Placement Shares described therein has been declined, suspended, or otherwise terminated in accordance with the terms of this Agreement, the Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such Placement Shares up to the amount specified in such Placement Notice, and otherwise in accordance with the terms of such Placement Notice. The Company acknowledges and agrees that (i) there can be no assurance that the Agent will be successful in selling Placement Shares, (ii) the Agent will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by the Agent to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares as required under this Agreement and (iii) the Agent shall be under no obligation to purchase Placement Shares on a principal basis pursuant to this Agreement, except as otherwise agreed by the Agent and the Company.

(b) Settlement of Placement Shares. Unless otherwise specified in the applicable Placement Notice, settlement for sales of Placement Shares will occur on the second (2nd) Trading Day (or such earlier day as is industry practice for regular-way trading) following the date on which such sales are made (each, a “Settlement Date”). The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Placement Shares sold (the “Net Proceeds”) will be equal to the aggregate sales price received by the Agent, after deduction for (i) the Agent’s commission, discount or other compensation for such sales payable by the Company pursuant to Section 2, and (ii) any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales.



(c) Delivery of Placement Shares. On or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Placement Shares being sold by crediting the Agent's or its designee's account (provided the Agent shall have given the Company written notice of such designee prior to the Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon by the parties hereto which in all cases shall be freely tradable, transferable, registered shares in good deliverable form. On each Settlement Date, the Agent will deliver the related Net Proceeds in same day funds to an account designated by the Company on, or prior to, the Settlement Date. The Company agrees that if the Company, or its transfer agent (if applicable), defaults in its obligation to deliver Placement Shares on a Settlement Date, the Company agrees that in addition to and in no way limiting the rights and obligations set forth in Section 10(a), it will (i) hold the Agent harmless against any loss, claim, damage, or expense (including reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company or its transfer agent (if applicable) and (ii) pay to the Agent any commission, discount, or other compensation to which it would otherwise have been entitled absent such default.

(d) Denominations; Registration. Certificates for the Placement Shares, if any, shall be in such denominations and registered in such names as the Agent may request in writing at least one full Business Day before the Settlement Date. The certificates for the Placement Shares, if any, will be made available by the Company for examination and packaging by the Agent in The City of New York not later than noon (New York time) on the Business Day prior to the Settlement Date.

(e) Limitations on Offering Size. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares if, after giving effect to the sale of such Placement Shares, the aggregate gross sales proceeds of Placement Shares sold pursuant to this Agreement would exceed the lesser of (A) together with all sales of Placement Shares under this Agreement, the Maximum Amount, (B) the amount available for offer and sale under the currently effective Registration Statement and (C) the amount authorized from time to time to be issued and sold under this Agreement by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the Agent in writing. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Company's board of directors, duly authorized committee thereof or a duly authorized executive committee, and notified to the Agent in writing. Further, under no circumstances shall the Company cause or permit the aggregate offering amount of Placement Shares sold pursuant to this Agreement to exceed the Maximum Amount.

6. Representations and Warranties of the Company. The Company represents and warrants to, and agrees with Agent that as of the date of this Agreement and as of each Applicable Time (as defined below):

(a) Registration Statement and Prospectus. The Company and the transactions contemplated by this Agreement meet the requirements for and comply with the conditions for the use of Form S-3 under the Securities Act. The Registration Statement has been filed with the Commission and has been declared effective under the Securities Act. The Prospectus will name Agent as underwriter, acting as agent, in the section entitled "Plan of Distribution." The Company has not received, and has no notice of, any order of the Commission preventing or suspending the use of the Registration Statement, or threatening or instituting proceedings for that purpose. The Registration Statement and the offer and sale of Placement Shares as contemplated hereby meet the requirements of Rule 415 and comply in all material respects with said Rule. Any statutes, regulations, contracts or other documents that are required to be

described in the Registration Statement or the Prospectus or to be filed as exhibits to the Registration Statement have been so described or filed. Copies of the Registration Statement, the Prospectus, and any such amendments or supplements and all documents incorporated by reference therein that were filed with the Commission on or prior to the date of this Agreement have been delivered, or are available through EDGAR, to Agent and its counsel. The Company has not distributed and, prior to the later to occur of each Settlement Date and completion of the distribution of the Placement Shares, will not distribute any offering material in connection with the offering or sale of the Placement Shares other than the Registration Statement and the Prospectus and any Issuer Free Writing Prospectus to which Agent has consented. The Common Stock is currently quoted on the Exchange under the trading symbol "SAVA". Except as disclosed in the Registration Statement, the Company has not, in the 12 months preceding the date hereof, received notice from the Exchange to the effect that the Company is not in compliance with the listing or maintenance requirements. The Company has no reason to believe that it will not in the foreseeable future continue to be in compliance with all such listing and maintenance requirements.

(b) No Misstatement or Omission. The Registration Statement, when it became or becomes effective, and the Prospectus, and any amendment or supplement thereto, on the date of such Prospectus or amendment or supplement, conformed and will conform in all material respects with the requirements of the Securities Act. At each Settlement Date, the Registration Statement and the Prospectus, as of such date, will conform in all material respects with the requirements of the Securities Act. The Registration Statement, when it became or becomes effective, did not, and 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 statements therein not misleading. The Prospectus and any amendment or supplement thereto, on the date thereof and at each Applicable Time (defined below), did not and will not include an 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 documents incorporated by reference in the Prospectus or any Prospectus Supplement did not, and any further documents filed and incorporated by reference therein will not, when filed with the Commission, contain an untrue statement of a material fact or omit to state a material fact required to be stated in such document or necessary to make the statements in such document, in light of the circumstances under which they were made, not misleading. The foregoing shall not apply to statements in, or omissions from, any such document made in reliance upon, and in conformity with, information furnished to the Company by Agent specifically for use in the preparation thereof.

(c) Conformity with Securities Act and Exchange Act. The Registration Statement, the Prospectus, any Issuer Free Writing Prospectus or any amendment or supplement thereto, and the Incorporated Documents, when such documents were or are filed with the Commission under the Securities Act or the Exchange Act or became or become effective under the Securities Act, as the case may be, conformed and will conform in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable.

(d) Financial Information. The financial statements of the Company included or incorporated by reference in the Registration Statement, the Prospectus and the Issuer Free Writing Prospectuses, if any, together with the related notes and schedules, present fairly, in all material respects, the financial position of the Company and the Subsidiaries (as defined below) as of the dates indicated and the results of operations, cash flows and changes in stockholders' equity of the Company and the Subsidiaries for the periods specified and have been prepared in compliance with the requirements of the Securities Act and Exchange Act and in conformity with generally accepted accounting principles ("GAAP") applied on a consistent basis during the periods involved; the other financial and statistical data with respect to the Company and the Subsidiaries contained or incorporated by reference in the Registration Statement, the Prospectus and the Issuer Free Writing Prospectuses, if any, are accurately

and fairly presented and prepared on a basis consistent with the financial statements and books and records of the Company and the Subsidiaries; 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; neither the Company nor the Subsidiaries 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 Issuer 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;

(e) Conformity with EDGAR Filing. The Prospectus delivered to Agent for use in connection with the sale of the Placement 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 under the Securities Act.

(f) Organization. The Company and the Subsidiaries, if any, are, and will be, duly organized, validly existing as a corporation or other legal entity and in good standing under the laws of its jurisdiction of organization. Each of the Company and the Subsidiaries is and will be, duly licensed or qualified as a foreign corporation or other legal entity for transaction of business and in good standing under the laws of each other jurisdiction in which its ownership or lease of property or the conduct of its business requires such license or qualification, and has all corporate or other power and authority necessary to own or hold its properties and to conduct its business 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), prospects, stockholders’ equity or results of operations of the Company and the Subsidiaries taken as a whole, or prevent or materially interfere with consummation of the transactions contemplated hereby (a “Material Adverse Effect”).

(g) Subsidiaries. The Company owns directly or indirectly, all of the equity interests of the Subsidiaries, if any, 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. The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21.1 to the Company’s Annual Report on Form 10-K for the most recently ended fiscal year and other than (i) those subsidiaries not required to be listed on Exhibit 21.1 by Item 601 of Regulation S-K under the Exchange Act and (ii) those subsidiaries formed since the last day of the most recently ended fiscal year.

(h) No Violation or Default. Neither the Company nor any Subsidiary is (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 any Subsidiary is a party or by which the Company or any Subsidiary is bound or to which any of the property or assets of the Company or any Subsidiary is 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 (i) and (ii) above, for any such violation or default that would not, individually or in the aggregate, have a Material Adverse Effect. To the Company’s knowledge, no other party under any material contract

or other agreement to which it or any Subsidiary is a party is in default in any respect thereunder where such default would have a Material Adverse Effect.

(i) No Material Adverse Effect. Subsequent to the respective dates as of which information is given in the Registration Statement, the Prospectus and the Issuer Free Writing Prospectuses, if any, (including any document deemed incorporated by reference therein), there has not been (i) any Material Adverse Effect, in or affecting the business, properties, management, condition (financial or otherwise), results of operations, or prospects of the Company, (ii) any transaction which is material to the Company and the Subsidiaries taken as a whole, (iii) any obligation or liability, direct or contingent (including any off-balance sheet obligations), incurred by the Company or the Subsidiaries which is material to the Company and the Subsidiaries taken as a whole, (iv) any material change in the capital stock or outstanding long-term indebtedness of the Company or the Subsidiaries or (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company or any Subsidiary, 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);

(j) S-3 Eligibility. (i) At the time of filing the Registration Statement and (ii) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Securities Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus), the Company met the then applicable requirements for use of Form S-3 under the Securities Act, including compliance with General Instruction I.B.1 of Form S-3, as applicable. As of the close of trading on the Exchange on February 11, 2020, the aggregate market value of the outstanding voting and non-voting common equity (as defined in Rule 405) of the Company held by persons other than affiliates of the Company (pursuant to Rule 144 of the Securities Act, 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 approximately \$191,149,987 million (calculated by multiplying (x) the price at which the common equity of the Company was last sold on the Exchange on February 11, 2020 times (y) the number of Non-Affiliate Shares). The Company is not a shell company (as defined in Rule 405) and has not been a shell company for at least 12 calendar months previously.

(k) Capitalization. The issued and outstanding shares of capital stock of the Company have been validly issued, are fully paid and non-assessable 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 and restricted stock units under the Company’s existing stock option 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) and such authorized capital stock conforms to the description thereof set forth in the Registration Statement and the Prospectus. The description of the securities 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.

(l) 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.

(m) Authorization of Placement Shares. The Placement Shares, when issued and delivered pursuant to the terms approved by the board of directors of the Company or a duly authorized committee thereof, against payment therefor as provided herein, will be duly and validly authorized and issued and fully paid and non-assessable, free and clear of any pledge, lien, encumbrance, security interest or other claim, including any statutory or contractual preemptive rights, resale rights, rights of first refusal or other similar rights, and will be registered pursuant to Section 12 of the Exchange Act. The Placement Shares, when issued, will conform in all material respects to the description thereof set forth in or incorporated into the Prospectus.

(n) 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, the issuance and sale by the Company of the Placement 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, Inc. ("FINRA") or the Exchange in connection with the sale of the Placement Shares by the Agent.

(o) No Preferential Rights. Except as set forth in the Registration Statement and the Prospectus, (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, (ii) no Person has any preemptive rights, resale rights, rights of first refusal, 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 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 Placement Shares as contemplated thereby or otherwise.

(p) Independent Public Accountant. Ernst & Young LLP (the "Accountant"), whose report on the consolidated financial statements of the Company is filed with the Commission as part of the Registration Statement and the Prospectus, are and, during the periods covered by their report, were an independent registered public accounting firm with respect to the Company within the meaning of the Securities Act and the Public Company Accounting Oversight Board (United States). To the Company's knowledge, after due and careful inquiry, 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.

(q) Enforceability of Agreements. All agreements between the Company and third parties expressly referenced in the Prospectus are legal, valid and binding obligations of the Company enforceable in accordance with their respective 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 and (ii) the indemnification provisions of certain agreements may be limited by federal or state securities laws or public policy considerations in respect thereof.

(r) 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 investigations, to which the Company or any Subsidiary is a party or to which any property of the Company or any Subsidiary is the subject that, individually or in the aggregate, if determined adversely to the Company or any Subsidiary, would have a Material Adverse Effect or materially and adversely affect the ability of the Company to perform its obligations under this Agreement; 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 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.

(s) Licenses and Permits. Except as set forth in the Registration Statement or the Prospectus, the Company and the Subsidiaries possess or have obtained, all licenses, certificates, consents, orders, approvals, permits and other authorizations issued by, and have made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities that are necessary for the ownership or lease of their respective properties or the conduct of their respective businesses as described in the Registration Statement and the Prospectus (the "Permits"), except where the failure to possess, obtain or make the same would not, individually or in the aggregate, have a Material Adverse Effect. Except as disclosed in the Registration Statement or the Prospectus, neither the Company nor any Subsidiary has received written notice of any proceeding relating to revocation or modification of any such Permit or has any reason to believe that such Permit will not be renewed in the ordinary course, except where the failure to obtain any such renewal would not, individually or in the aggregate, have a Material Adverse Effect.

(t) Capitalization. The authorized, issued and outstanding stock of the Company is as set forth in the Company's most recent Annual Report on Form 10-K. The issued and outstanding shares of stock of the Company have been duly authorized and are validly issued, fully paid and nonassessable; and none of the outstanding shares of stock of the Company was issued in violation of any preemptive rights, rights of first refusal or other similar rights of any securityholder of the Company or any other person.

(u) No Material Defaults. Neither the Company nor any Subsidiary 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, 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, could reasonably be expected to have a Material Adverse Effect.

(v) Certain Market Activities. Neither the Company, any Subsidiary nor any of their respective directors, officers or controlling persons has taken, directly or indirectly, any action designed, or that has constituted or might reasonably be expected to cause or result in, under the Exchange Act or otherwise, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Placement Shares.

(w) Broker/Dealer Relationships. Neither the Company, any of its Subsidiaries nor

any related entities (i) is 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, controls or is a “person associated with a member” or “associated person of a member” (within the meaning set forth in the FINRA Manual).

(x) 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 Placement Shares.

(y) Taxes. The Company and the 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 as otherwise disclosed in or contemplated by the Registration Statement or the Prospectus, no tax deficiency has been determined adversely to the Company or any Subsidiary which has had, 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 which has been or might be asserted or threatened against it which would have a Material Adverse Effect.

(z) Title to Real and Personal Property. Except as set forth in the Registration Statement or the Prospectus, the Company and the Subsidiaries have good and valid title in fee simple to all items of real property and 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 such Subsidiary, in each case free and clear of all liens, encumbrances and claims, except those that (i) do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries or (ii) would not, individually or in the aggregate, have a Material Adverse Effect. Any real property described in the Registration Statement or Prospectus as being leased by the Company and the 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 the Subsidiaries or (B) would not have a Material Adverse Effect.

(aa) Intellectual Property. Except as set forth in the Registration Statement or the Prospectus, the Company believes it and the Subsidiaries own or possess adequate enforceable rights to use all patents, patent applications, trademarks (both registered and unregistered), service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses and know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) (collectively, the “Intellectual Property”), necessary for the conduct of their respective businesses as conducted as of the date hereof, except to the extent that the failure to own or possess adequate rights to use such Intellectual Property would not, individually or in the aggregate, have a Material Adverse Effect; neither the Company nor any Subsidiary has received any written notice of any claim of infringement or conflict which asserted Intellectual Property rights of others, which infringement or conflict, if the subject of an unfavorable decision, would have a Material Adverse Effect; there are no pending, or to the Company’s knowledge, threatened judicial proceedings or interference proceedings challenging the Company’s or any Subsidiary’s rights in or to or the validity of the scope of any of the Company’s or any Subsidiary’s patents, patent applications or proprietary information; the Company is not aware of any other entity or individual that has any right or claim in any of the Company’s or any Subsidiary’s patents, patent applications or any patent to be issued therefrom by virtue of any contract, license or other agreement entered into between such entity or individual and the Company, any Subsidiary or by any non-contractual obligation, other than by written licenses granted by the Company; the Company has not received any written notice of any claim challenging the rights of the Company or any Subsidiary in or to any Intellectual Property owned, licensed or optioned by the Company or any

Subsidiary which claim, if the subject of an unfavorable decision would result in a Material Adverse Effect.

(bb) Environmental Laws. Except as set forth in the Registration Statement or the Prospectus, the Company and the 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, have a Material Adverse Effect.

(cc) Disclosure Controls. The Company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company’s internal control over financial reporting includes those policies and procedures that: pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets; provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and board of directors; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements. 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 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. 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 Act) or, to the Company’s knowledge, in other factors that could significantly affect the Company’s internal controls. To the knowledge of the Company, the Company’s “internal controls over financial reporting” and “disclosure controls and procedures” are effective.

(dd) Sarbanes-Oxley. The Company is not aware of any failure on the part of the Company or any of the Company’s directors or officers, in their capacities as such, to comply with any applicable provisions of the Sarbanes-Oxley Act and the applicable rules and regulations promulgated thereunder in all material respects. 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.

(ee) Finder’s Fees. Neither the Company nor any Subsidiary has 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 Agent pursuant to this Agreement.

(ff) Labor Disputes. No labor disturbance by or dispute with employees of the Company or any Subsidiary exists or, to the knowledge of the Company, is threatened which would have a Material Adverse Effect.

(gg) Investment Company Act. Neither the Company or any Subsidiary is or, after giving effect to the offering and sale of the Placement Shares, will it 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”).

(hh) Operations. The operations of the Company and the 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 any Subsidiary is 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 have 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 any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(ii) 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.

(jj) 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.

(kk) 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 any of its affiliates for employees or former employees of the Company and the Subsidiaries has 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.

(ll) 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. The Forward Looking Statements incorporated by reference in the Registration Statement and the Prospectus from the Company’s Annual Report on Form 10-K for the fiscal year most recently ended (i) are within the coverage of the safe harbor for forward looking statements set forth in Section 27A of the Securities Act, Rule 175(b) under the Securities Act or Rule 3b-6 under the Exchange Act, as applicable, (ii) were made by the Company with a reasonable basis and in good faith and reflect the Company’s good faith commercially reasonable best estimate of the matters described therein, and (iii) have been prepared in accordance with Item 10 of Regulation S-K under the Securities Act.

(mm) Agent Purchases. The Company acknowledges and agrees that 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 a Placement Notice is in effect (except to the extent the Agent may engage in sales of Placement Shares purchased or deemed purchased from the Company as a “riskless principal” or in a similar capacity) and (ii) the Company shall not be deemed to have authorized or consented to any such purchases or sales by the Agent.

(nn) Margin Rules. Neither the issuance, sale and delivery of the Placement Shares nor the application of the proceeds thereof by the Company as described in the Registration Statement and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.

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

(pp) No Improper Practices. (i) Neither the Company nor to the Company’s knowledge, the Subsidiaries nor any of their respective executive officers 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, to the Company’s knowledge, the Subsidiaries or any affiliate of any of them, on the one hand, and the directors, officers and stockholders of the Company, or to the Company’s knowledge, the Subsidiaries, 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 the Subsidiaries or any affiliate of them, on the one hand, and the directors, officers, stockholders or directors of the Company or to the Company’s knowledge, the Subsidiaries, 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, to the Company's knowledge, the Subsidiaries 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; and (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 the Subsidiaries nor, to the Company's knowledge, any employee or agent of the Company or the Subsidiaries has made any payment of funds of the Company or the Subsidiaries or received or retained any funds in violation of any law, rule or regulation (including, without limitation, the Foreign Corrupt Practices Act of 1977, which payment, receipt or retention of funds is of a character required to be disclosed in the Registration Statement or the Prospectus.

(qq) Compliance with Applicable Laws. The Company (A) to its knowledge, is and at all times has been in material compliance with all statutes, rules and 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 under development, manufactured or distributed by the Company ("Applicable Laws"), (b) has not received any Form 483 from the FDA, notice of adverse finding, warning letter, or other written correspondence or notice from the FDA, the European Medicines Agency (the "EMA"), or any other federal, state, local or foreign governmental or regulatory authority alleging or asserting material noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws ("Authorizations"), which would, individually or in the aggregate, result in a Material Adverse Effect; (C) possesses all material Authorizations and such Authorizations are valid and in full force and effect and the Company is not in material violation of any term of any such Authorizations; (D) has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from the FDA, the EMA, or any other federal, state, local or foreign governmental or regulatory authority or third party alleging that any Company product, operation or activity is in material violation of any Applicable Laws or Authorizations and has no knowledge that the FDA, the EMA, or any other federal, state, local or foreign governmental or regulatory authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding against the Company; (E) has not received notice that the FDA, EMA, or any other federal, state, local or foreign governmental or regulatory authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any material Authorizations and has no knowledge that the FDA, EMA, or any other federal, state, local or foreign governmental or regulatory authority is considering such action; and (F) to its knowledge, has filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations except where the failure to file such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments would not result in a Material Adverse Effect, and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were materially complete and correct on the date filed (or were corrected or supplemented by a subsequent submission).

(rr) Clinical Studies. All animal and other preclinical studies and clinical trials conducted by the Company or on behalf of the Company were, and, if still pending are, to the Company's knowledge, being conducted in all material respects in compliance with all Applicable Laws and in accordance with experimental protocols, procedures and controls generally used by qualified experts in the preclinical study and clinical trials of new drugs and biologics as applied to comparable products to those being developed by the Company; the descriptions of the results of such preclinical studies and

clinical trials contained in the Registration Statement and the Prospectus are accurate in all material respects, and, except as set forth in the Registration Statement and the Prospectus, the Company has no knowledge of any other clinical trials or preclinical studies, the results of which reasonably call into question the clinical trial or preclinical study results described or referred to in the Registration Statement and the Prospectus when viewed in the context in which such results are described; and the Company has not received any written notices or correspondence from the FDA, the EMA, or any other domestic or foreign governmental agency requiring the termination or suspension of any preclinical studies or clinical trials conducted by or on behalf of the Company that are described in the Registration Statement and the Prospectus or the results of which are referred to in the Registration Statement and the Prospectus.

(ss) Compliance Program. The Company has established and administers a compliance program applicable to the Company, to assist the Company and the directors, officers and employees of the Company in complying with applicable regulatory guidelines (including, without limitation, those administered by the FDA, the EMA, and any other foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA or EMA); except where such noncompliance would not reasonably be expected to have a Material Adverse Effect.

(tt) No Misstatement or Omission in an Issuer Free Writing Prospectus. Each Issuer Free Writing Prospectus, as of its issue date and as of each Applicable Time (as defined below), did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any incorporated document deemed to be a part thereof that has not been superseded or modified. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by the Agent specifically for use therein.

(uu) No Conflicts. Neither the execution of this Agreement, nor the issuance, offering or sale of the Placement 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.

(vv) OFAC. (i) The Company represents that, neither it or any Subsidiary (collectively, the “Entity”) nor any director, officer, employee, agent, affiliate or representative of the Entity, is a government, individual, or entity (in this paragraph (vv), “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 (“OFAC”), the United Nations Security Council (“UNSC”), the European Union (“EU”), Her Majesty’s Treasury (“HMT”), or other relevant sanctions authority (collectively, “Sanctions”), nor

(B) located, organized or resident in a country or territory that is the subject of Sanctions.

(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 that, at the time of such funding or facilitation, is the subject of Sanctions; 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 Prospectus, for the past 5 years, it has not knowingly engaged in, is not now knowingly engaged in, and will not engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(ww) 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 Placement 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.

(xx) IT Systems. (i)(x) There has been no security breach or other compromise of any Company's or its Subsidiaries' information technology and computer systems, networks, hardware, software, data (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of them), equipment or technology (collectively, "IT Systems and Data") and (y) the Company and its Subsidiaries have not been notified of, and have no knowledge of any event or condition that would reasonably be expected to result in, any security breach or other compromise to their IT Systems and Data; (ii) the Company and each Subsidiary is presently in material 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, have a Material Adverse Effect; and (iii) the Company and the Subsidiaries have implemented backup and disaster recovery technology consistent with industry standards and practices.

(yy) FINRA Exemption. To enable the Agent to rely on Rule 5110(b)(7)(C)(i) of FINRA, the Company represents that the Company (i) has a non-affiliate, public common equity float of at least \$150 million or a non-affiliate, public common equity float of at least \$100 million and annual trading volume of at least three million shares and (ii) has been subject to the Exchange Act reporting requirements for a period of at least 36 months.

Any certificate signed by an officer of the Company and delivered to the Agent or to counsel for the Agent pursuant to or in connection with this Agreement shall be deemed to be a representation and warranty by the Company, as applicable, to the Agent as to the matters set forth therein.

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

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which a Prospectus relating to any Placement Shares is required to be delivered by Agent under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 (as defined below)), (i) the Company will notify the Agent promptly of the time when any subsequent amendment to the Registration Statement, other than documents incorporated by reference, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus or for additional information, (ii) the Company will prepare and file with the Commission, promptly upon the Agent's request, any amendments or supplements to the Registration Statement or Prospectus that, in the Agent's reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by the Agent (provided, however, that the failure of the Agent to make such request shall not relieve the Company of any obligation or liability hereunder, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement and provided, further, that the only remedy the Agent shall have with respect to the failure to make such filing shall be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus relating to the Placement Shares or a security convertible into the Placement Shares unless a copy thereof has been submitted to Agent within a reasonable period of time before the filing and the Agent has not objected thereto (provided, however, that the failure of the Agent to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement and provided, further, that the only remedy Agent shall have with respect to the failure to by the Company to obtain such consent shall be to cease making sales under this Agreement) and the Company will furnish to the Agent at the time of filing thereof a copy of any document that upon filing is deemed to be incorporated by reference into the Registration Statement or Prospectus, except for those documents available via EDGAR; and (iv) the Company will cause each amendment or supplement to the Prospectus to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) or, in the case of any document to be incorporated therein by reference, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed (the determination to file or not file any amendment or supplement with the Commission under this Section 7(a), based on the Company's reasonable opinion or reasonable objections, shall be made exclusively by the Company).

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

(c) Delivery of Prospectus; Subsequent Changes. During any period in which a Prospectus relating to the Placement Shares is required to be delivered by the Agent under the Securities Act with respect to the offer and sale of the Placement Shares, (including in circumstances where such requirement may be satisfied pursuant to Rule 172), the Company will comply with all requirements

imposed upon it by the Securities Act, as from time to time in force, and to file on or before their respective due dates all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If the Company has omitted any information from the Registration Statement pursuant to Rule 430A, it will use its best efforts to comply with the provisions of and make all requisite filings with the Commission pursuant to Rule 430A and to notify the Agent promptly of all such filings. If during such period any event occurs as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify Agent to suspend the offering of Placement Shares during such period and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance.

(d) Listing of Placement Shares. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by the Agent under the Securities Act with respect to the offer and sale of the Placement Shares, the Company will use its reasonable best efforts to cause the Placement Shares to be listed on the Exchange and to qualify the Placement Shares for sale under the securities laws of such jurisdictions as Agent reasonably designate and to continue such qualifications in effect so long as required for the distribution of the Placement Shares; provided, however, that the Company shall not be required in connection therewith to qualify as a foreign corporation or dealer in securities or file a general consent to service of process in any jurisdiction.

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

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

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

(h) Notice of Other Sales. Without prior written notice to Agent, the Company will not, directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock during the period beginning on the date on which any Placement Notice is delivered to Agent hereunder and ending on the third (3rd) Trading Day immediately following the final Settlement

Date with respect to Placement Shares sold pursuant to such Placement Notice (or, if the Placement Notice has been terminated or suspended prior to the sale of all Placement Shares covered by a Placement Notice, the date of such suspension or termination).

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

(j) Due Diligence Cooperation. The Company will cooperate with any reasonable due diligence review conducted by the Agent or its representatives in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during regular business hours and at the Company's principal offices, as the Agent may reasonably request.

(k) Required Filings Relating to Placement of Placement Shares. The Company agrees that on such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) (each and every filing under Rule 424(b), a "Filing Date"), which prospectus supplement will set forth, within the relevant period, the amount of Placement Shares sold through the Agent, the Net Proceeds to the Company and the compensation payable by the Company to the Agent with respect to such Placement Shares, and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market.

(l) Representation Dates; Certificate. On the date of this Agreement and each time the Company:

(i) files the Prospectus relating to the Placement Shares or amends or supplements (other than (A) a prospectus supplement relating solely to an offering of securities other than the Placement Shares or (B) a prospectus supplement relating solely to the number of Placement Shares sold in a particular fiscal quarter) the Registration Statement or the Prospectus relating to the Placement Shares 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 the Prospectus relating to the Placement Shares;

(ii) files an Annual Report on Form 10-K under the Exchange Act (including any Form 10-K/A containing amended financial information or a material amendment to the previously filed Form 10-K);

(iii) files its Quarterly Reports on Form 10-Q under the Exchange Act; or

(iv) files a Current Report on Form 8-K containing amended financial information (other than information "furnished" pursuant to Items 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to the reclassification of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) under the Exchange Act;

(Each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a "Representation Date.")



the Company shall furnish the Agent (but in the case of clause (iv) above only if the Agent reasonably determines that the information contained in such Form 8-K is material) with a certificate, in the form attached hereto as Exhibit 7(l). The requirement to provide a certificate under this Section 7(l) shall be waived for any Representation Date occurring at a time at which no Placement Notice is pending, which waiver shall continue until the earlier to occur of the date the Company delivers a Placement Notice hereunder (which for such calendar quarter shall be considered a Representation Date) and the next occurring Representation Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Representation Date when the Company relied on such waiver and did not provide the Agent with a certificate under this Section 7(l), then before the Company delivers the Placement Notice or the Agent sells any Placement Shares, the Company shall provide the Agent with a certificate, in the form attached hereto as Exhibit 7(l), dated the date of the Placement Notice.

(m) Legal Opinion. (1) On the date of this Agreement and (2) within five (5) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(l) for which no waiver is applicable, the Company shall cause to be furnished to the Agent a written opinion of Morrison & Foerster LLP ("Company Counsel"), or other counsel satisfactory to the Agent, in form and substance satisfactory to Agent and its counsel; provided, further, that in lieu of such opinions for subsequent periodic filings under the Exchange Act, counsel may furnish the Agent with a letter (a "Reliance Letter") to the effect that the Agent may rely on a prior opinion delivered under this Section 7(m) to the same extent as if it were dated the date of such letter (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 the date of the Reliance Letter).

(n) Comfort Letter. (1) On the date of this Agreement and (2) within five (5) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(l) for which no waiver is applicable, the Company shall cause its independent accountants to furnish the Agent letters (the "Comfort Letters"), dated the date the Comfort Letter is delivered, which shall meet the requirements set forth in this Section 7(n). The Comfort Letter from the Company's independent accountants shall be in a form and substance satisfactory to the Agent, (i) confirming that they are an independent public accounting firm within the meaning of the Securities Act and the Public Company Accounting Oversight Board (PCAOB), (ii) stating, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to underwriters in connection with registered public offerings (the first such letter, the "Initial Comfort Letter") and (iii) updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(o) Market Activities. The Company will not, directly or indirectly, (i) take any action designed to cause or result in, or that constitutes or might reasonably be expected to constitute, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of Common Stock or (ii) sell, bid for, or purchase Common Stock, or pay anyone any compensation for soliciting purchases of the Placement Shares other than the Agent.

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

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

(r) Sarbanes-Oxley Act. The Company will maintain and keep accurate books and records reflecting its assets and maintain internal accounting controls in a manner designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and including those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company, (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of the Company's consolidated financial statements in accordance with generally accepted accounting principles, (iii) that receipts and expenditures of the Company are being made only in accordance with management's and the Company's directors' authorization, and (iv) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on its financial statements. The Company will maintain such controls and other procedures, including, without limitation, those required by Sections 302 and 906 of the Sarbanes-Oxley Act, and the applicable regulations thereunder that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, including, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure and to ensure that material information relating to the Company is made known to them by others within those entities, particularly during the period in which such periodic reports are being prepared.

8. Payment of Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated in accordance with the provisions of Section 12 hereunder, will pay all expenses at cost without further markup incident to the performance of its obligations under this Agreement, including (i) the preparation, filing, including any fees required by the Commission, and printing of the Registration Statement (including financial statements and exhibits) as originally filed and of each amendment and supplement thereto, in such number as the Agent shall deem necessary, (ii) the printing and delivery to the Agent of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Placement Shares, (iii) the preparation, issuance and delivery of the certificates, if any, for the Placement Shares to the Agent, including any stock or other transfer taxes and any capital duties, stamp duties or other duties or taxes payable upon the sale, issuance or delivery of the Placement Shares to the Agent, (iv) the fees and disbursements of the counsel, accountants and other advisors to the Company, (v) the reasonable and documented out-of-pocket expenses of the Agent, including reasonable and documented fees and disbursements of counsel to the Agent incurred in connection with entering into the transactions contemplated by this Agreement in an amount not to exceed \$50,000 in the aggregate (vi) the printing and delivery to the Agent of copies of any Permitted Issuer Free Writing Prospectus (defined below) and the Prospectus and any amendments or supplements thereto in such number as the Agent shall deem necessary, (vii) the fees and expenses of the transfer agent and registrar for the Common Stock, (viii) the fees and expenses incident to any review by FINRA of the terms of the sale of the Placement Shares, including fees and expenses of counsel to the Agent, (ix) the fees and expenses incurred in

connection with the listing of the Placement Shares on the Exchange and (x) the qualification of the Placement Shares under securities laws in accordance with the provisions of Section 7(d) of this Agreement, including filing fees (provided, however, that any fees or disbursements of counsel for the Agent in connection therewith shall be paid by the Agent except as set forth in clauses (vii) and (viii) below).

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

(a) Registration Statement Effective. The Registration Statement shall have become effective and shall be available for the (i) resale of all Placement Shares issued to the Agent and not yet sold by the Agent and (ii) sale of all Placement Shares contemplated to be issued by any Placement Notice.

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

(c) No Misstatement or Material Omission. Agent shall not have advised the Company that the Registration Statement or Prospectus, 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 opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(d) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change, on a consolidated basis, in the authorized capital stock of the Company or any Material Adverse Effect, or any development that could reasonably be expected to cause a Material Adverse Effect.

(e) Company Counsel Legal Opinion. The Agent shall have received the opinions of Company Counsel required to be delivered pursuant Section 7(m) on or before the date on which such

delivery of such opinion is required pursuant to Section 7(m).

(f) Agent Counsel Legal Opinion. Agent shall have received from Duane Morris LLP, counsel for the Agent, such opinion or opinions, on or before the first date on which the delivery of the Company Counsel legal opinion is required pursuant to Section 7(m), with respect to such matters as the Agent may reasonably require, and the Company shall have furnished to such counsel such documents as they reasonably request for enabling them to pass upon such matters.

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

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

(i) Secretary's Certificate. On the date of this Agreement, the Agent shall have received a certificate, signed on behalf of the Company by its corporate Secretary, in form and substance satisfactory to the Agent and its counsel.

(j) No Suspension. Trading in the Common Stock shall not have been suspended on the Exchange, and the Common Stock shall not have been delisted from the Exchange.

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

(l) Securities Act Filings Made. All filings with the Commission required by Rule 424 to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424.

(m) Approval for Listing. The Placement Shares shall either have been approved for listing quotation on the Exchange, subject only to notice of issuance, or the Company shall have filed an application for listing quotation of the Placement Shares on the Exchange at, or prior to, the issuance of any Placement Notice.

(n) No Termination Event. There shall not have occurred any event that would permit the Agent to terminate this Agreement pursuant to Section 12(a).

10. Indemnification and Contribution.

(a) Company Indemnification. The Company agrees to indemnify and hold harmless the Agent, its partners, members, directors, officers, employees and agents and each person, if any, who controls the Agent within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act as follows:

- (i) against any and all loss, liability, claim, damage and expense

whatsoever, as incurred, joint or several, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading, or arising out of any untrue statement or alleged untrue statement of a material fact included in any related Issuer Free Writing Prospectus 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 the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that (subject to Section 10(d)) any such settlement is effected with the written consent of the Agent, which consent shall not unreasonably be delayed or withheld; and

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission, to the extent that any such expense is not paid under (i) or (ii) above,

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made solely in reliance upon and in conformity with written information furnished to the Company by the Agent expressly for use in the Registration Statement (or any amendment thereto), or in any related Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto).

(b) Agent Indemnification. Agent agrees to indemnify and hold harmless the Company and its directors and each officer of the Company who signed the Registration Statement, and each person, if any, who (i) controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Company against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 10(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendments thereto) or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with information relating to the Agent and furnished to the Company in writing by the Agent expressly for use therein.

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 10 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 10, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 10 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 10 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it

notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any legal or other expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly as they are incurred. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 10 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (2) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 10 is applicable in accordance with its terms but for any reason is held to be unavailable from the Company or the Agent, the Company and the Agent will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than the Agent, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed the Registration Statement and directors of the Company, who also may be liable for contribution) to which the Company and the Agent may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Agent on the other hand. The relative benefits received by the Company on the one hand and the Agent on the other hand shall be deemed to be in the same proportion as the total net proceeds from the sale of the Placement Shares (before deducting expenses) received by the Company bear to the total compensation received by the Agent (before deducting expenses) from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand,

and the Agent, on the other hand, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Agent, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Agent agree that it would not be just and equitable if contributions pursuant to this Section 10(e) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this Section 10(e) shall be deemed to include, for the purpose of this Section 10(e), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim to the extent consistent with Section 10(c). Notwithstanding the foregoing provisions of this Section 10(e), the Agent shall not be required to contribute any amount in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 10(e), any person who controls a party to this Agreement within the meaning of the Securities Act, and any officers, directors, partners, employees or agents of the Agent, will have the same rights to contribution as that party, and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 10(d), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 10(e) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 10(c), no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 10(c).

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

12. Termination.

(a) The Agent may terminate this Agreement, by notice to the Company, as hereinafter specified at any time (1) if there has been, since the time of execution of this Agreement or since the date as of which information is given in the Prospectus, any change, or any development or event involving a prospective change, in the condition, financial or otherwise, or in the business, properties, earnings or results of operations of the Company, whether or not arising in the ordinary course of business, which individually or in the aggregate, in the sole judgment of the Agent is material and adverse and makes it impractical or inadvisable to market the Placement Shares or to enforce contracts for the sale of the Placement Shares, (2) if there has occurred any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the judgment of the Agent, impracticable or inadvisable to market the Placement

Shares or to enforce contracts for the sale of the Placement Shares, (3) if trading in the Common Stock has been suspended or limited by the Commission or the Exchange, or if trading generally on the Exchange has been suspended or limited, or minimum prices for trading have been fixed on the Exchange, (4) if any suspension of trading of any securities of the Company on any exchange or in the over-the-counter market shall have occurred and be continuing, (5) if a major disruption of securities settlements or clearance services in the United States shall have occurred and be continuing, or (6) if a banking moratorium has been declared by either U.S. Federal or New York authorities. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8 (Expenses), Section 10 (Indemnification), Section 11 (Survival of Representations), Section 17 (Governing Law; Consent to Jurisdiction) and Section 18 (Waiver of Jury Trial) hereof shall remain in full force and effect notwithstanding such termination. If the Agent elects to terminate this Agreement as provided in this Section 12(a), the Agent shall provide the required notice as specified in Section 13 (Notices).

(b) The Company shall have the right, by giving five (5) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8, Section 10, Section 11, Section 17 and Section 18 hereof shall remain in full force and effect notwithstanding such termination.

(c) The Agent shall have the right, by giving five (5) days' notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8, Section 10, Section 11, Section 17 and Section 18 hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this Section 12, this Agreement shall automatically terminate upon the issuance and sale of all of the Placement Shares through the Agent on the terms and subject to the conditions set forth herein; provided that the provisions of Section 8, Section 10, Section 11, Section 17 and Section 18 hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 12(a), (b), (c), or (d) or otherwise by mutual agreement of the parties; provided, however, that any such termination by mutual agreement shall in all cases be deemed to provide that Section 8, Section 10, Section 11, Section 17 and Section 18 shall remain in full force and effect.

(f) Any termination of this Agreement shall be effective on the date specified in such notice of termination; provided, however, that such termination shall not be effective until the close of business on the date of receipt of such notice by the Agent or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Placement Shares, such Placement Shares shall settle in accordance with the provisions of this Agreement.

(g) Subject to the additional limitations set forth in Section 8, in the event of termination of this Agreement prior to the sale of any Placement Shares, the Agent shall be entitled only to reimbursement of its out-of-pocket expenses actually incurred.

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



SVB Leerink LLC  
255 California Street, 12th Floor  
San Francisco, California 94111  
Attention: Murphy Gallagher  
Email: murphy.gallagher@svbleerink.com

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

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

with a copy to:

Duane Morris LLP  
1540 Broadway  
New York, NY 10036  
Attention: Dean Colucci, Esq.  
Email: dmcolucci@duanemorris.com

and if to the Company, shall be delivered to:

Cassava Sciences, Inc.  
7801 N Capital of Texas Highway, Suite 260  
Austin, TX 78731  
Attention: Remi Barbier  
Facsimile: (512) 614-0414  
Email: remi@cassavasciences.com

with a copy to:

Morrison & Foerster LLP  
425 Market Street  
San Francisco, CA 94105-2482  
Attention: Alfredo B. D. Silva  
Email: asilva@mofo.com

Each party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally or by verifiable facsimile transmission (with an original to follow) on or before 4:30 p.m., New York City time, on a Business Day or, if such day is not a Business Day, on the next succeeding Business Day, (ii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iii) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid).

An electronic communication ("Electronic Notice") shall be deemed written notice for purposes of this Section 13 if sent to the electronic mail address specified by the receiving party under separate cover. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives

verification of receipt by the receiving party. Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form ("Nonelectronic Notice") which shall be sent to the requesting party within ten (10) days of receipt of the written request for Nonelectronic Notice.

14. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and the Agent and their respective successors and the affiliates, controlling persons, officers and directors referred to in Section 10. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; provided, however, that the Agent may assign its rights and obligations hereunder to an affiliate thereof without obtaining the Company's consent.

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

16. Entire Agreement; Amendment; Severability. This Agreement (including all schedules and exhibits attached hereto and Placement Notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and the Agent. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement.

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

18. **CONSENT TO JURISDICTION. EACH PARTY HEREBY IRREVOCABLY SUBMITS TO THE NON-EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH ANY TRANSACTION CONTEMPLATED HEREBY, AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT, THAT SUCH SUIT, ACTION OR PROCEEDING IS BROUGHT IN AN INCONVENIENT FORUM OR THAT THE VENUE OF SUCH SUIT, ACTION OR PROCEEDING IS IMPROPER. EACH**

**PARTY HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF (CERTIFIED OR REGISTERED MAIL, RETURN RECEIPT REQUESTED) TO SUCH PARTY AT THE ADDRESS IN EFFECT FOR NOTICES TO IT UNDER THIS AGREEMENT AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW.**

19. Use of Information. The Agent may not use any information gained in connection with this Agreement and the transactions contemplated by this Agreement, including due diligence, to advise any party with respect to transactions not expressly approved by the Company.

20. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile transmission.

21. Effect of Headings. The section and Exhibit headings herein are for convenience only and shall not affect the construction hereof.

22. Permitted Free Writing Prospectuses.

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

23. Absence of Fiduciary Relationship.

The Company acknowledges and agrees that:

(a) The Agent is acting solely as agent in connection with the public offering of the Placement Shares and in connection with each transaction contemplated by this Agreement and the process leading to such transactions, and no fiduciary or advisory relationship between the Company or any of its respective affiliates, stockholders (or other equity holders), creditors or employees or any other party, on the one hand, and the Agent, on the other hand, has been or will be created in respect of any of the transactions contemplated by this Agreement, irrespective of whether or not the Agent has advised or is advising the Company on other matters, and the Agent has no obligation to the Company with respect to the transactions contemplated by this Agreement except the obligations expressly set forth in this Agreement; it is capable of evaluating and understanding, and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement;

(b) the Agent has not provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated by this Agreement and it has consulted its own legal, accounting,

regulatory and tax advisors to the extent it has deemed appropriate;

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

(d) it waives, to the fullest extent permitted by law, any claims it may have against the Agent for breach of fiduciary duty or alleged breach of fiduciary duty in connection with the sale of Placement Shares under this Agreement and agrees that the Agent shall not have any liability (whether direct or indirect, in contract, tort or otherwise) to it in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on its behalf or in right of it or the Company, employees or creditors of Company, other than in respect of the Agent's obligations under this Agreement and to keep information provided by the Company to the Agent and the Agent's counsel confidential to the extent not otherwise publicly-available.

#### 24. Definitions.

As used in this Agreement, the following terms have the respective meanings set forth below:

"Applicable Time" means (i) each Representation Date, (ii) the time of each sale of any Placement Shares pursuant to this Agreement, and (iii) each Settlement Date.

"Business Day" shall mean any day on which the Exchange and commercial banks in the City of New York are open for business.

"Issuer Free Writing Prospectus" means any "issuer free writing prospectus," as defined in Rule 433, relating to the Placement Shares that (1) is required to be filed with the Commission by the Company, (2) is a "road show" that is a "written communication" within the meaning of Rule 433(d)(8)(i) whether or not required to be filed with the Commission, or (3) is exempt from filing pursuant to Rule 433(d)(5)(i) because it contains a description of the Placement Shares or of the offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g).

"Rule 172," "Rule 405," "Rule 415," "Rule 424," "Rule 424(b)," "Rule 430A," "Rule 430B," and "Rule 433" refer to such rules under the Securities Act Regulations.

"Subsidiary" means any subsidiary of the Company that may be identified on Exhibit 21.1 to the Company's Annual Report on Form 10-K for the most recently ended fiscal year, and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

"Trading Day" means any day on which shares of Common Stock are purchased and sold on the Exchange.

All references in this Agreement to financial statements and schedules and other information that is "contained," "included" or "stated" in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information that is incorporated by reference in the Registration Statement or the Prospectus, as the case may be.

All references in this Agreement to the Registration Statement, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to EDGAR; all references in this Agreement to any Issuer Free Writing Prospectus (other than any Issuer Free Writing Prospectuses that, pursuant to Rule 433, are not required to be filed with the Commission) shall be deemed to include the copy thereof filed with the Commission pursuant to EDGAR; and all references in this Agreement to “supplements” to the Prospectus shall include, without limitation, any supplements, “wrappers” or similar materials prepared in connection with any offering, sale or private placement of any Placement Shares by the Agent outside of the United States.

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

Very truly yours,

**CASSAVA SCIENCES, INC.**

By: \_\_\_\_\_/s/ REMI BARBIER \_\_\_\_\_

Name: Remi Barbier

Title: President & Chief Executive Officer

ACCEPTED as of the date first-above  
written:

**SVB LEERINK LLC**

By: \_\_\_\_\_/s/ PETER FRY \_\_\_\_\_

Name: Peter Fry

Title: Managing Director – Head of  
Alternative Equities

**SCHEDULE 1**

**FORM OF PLACEMENT NOTICE**

From: CASSAVA SCIENCES, INC.

To: SVB LEERINK LLC

Attention: \_\_\_\_\_

Subject: Placement Notice

Date: \_\_\_\_\_

Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement between, Cassava Sciences, Inc. (the "Company") and SVB Leerink LLC ("Agent"), dated March 27, 2020, the Company hereby requests that the Agent sell up to \_\_\_\_\_ of the Company's Common Stock, \$0.001 par value per share, at a minimum market price of \$ \_\_\_\_\_ per share, during the time period beginning [month, day, time] and ending [month, day, time].

## **SCHEDULE 2**

### **Compensation**

The Company shall pay to the Agent in cash, upon each sale of Placement Shares pursuant to this Agreement, an amount equal to 3.0% of aggregate sales price received by the Agent from each sale of Placement Shares.



## SCHEDULE 3

### Notice Parties

#### The Company

The Chief Executive Officer and the Chief Financial Officer together (but not separately)

#### The Agent

Murphy Gallagher  
Peter Fry  
Patrick Morley  
Robert Austin  
Stuart Nayman  
Eric Olson

**EXHIBIT 7(m)**

**Form of Representation Date Certificate**

This Representation Date Certificate (this "Certificate") is executed and delivered in connection with Section 7(l) of the Sales Agreement (the "Agreement"), March 27, 2020, and entered into between Cassava Sciences, Inc. (the "Company") and SVB Leerink LLC. All capitalized terms used but not defined herein shall have the meanings given to such terms in the Agreement

The undersigned, a duly appointed and authorized officer of the Company, having made all necessary inquiries to establish the accuracy of the statements below and having been authorized by the Company to execute this certificate, hereby certifies as follows:

1. As of the date of this Certificate, (i) the Registration Statement does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading, and (ii) the Prospectus does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

2. Each of the representations and warranties of the Company contained in the Agreement were, when originally made, and are, as of the date of this Certificate, true and correct in all material respects.

3. Each of the covenants required to be performed by the Company in the Agreement on or prior to the date of the Agreement, this Representation Date, and each such other date as set forth in the Agreement, has been duly, timely and fully performed in all material respects and each condition required to be complied with by the Company on or prior to the date of the Agreement, this Representation Date, and each such other date as set forth in the Agreement or in the Waivers has been duly, timely and fully complied with in all material respects.

4. Subsequent to the date of the most recent financial statements in the Prospectus, there has been no Material Adverse Effect.

5. No stop order suspending the effectiveness of the Registration Statement or of any part thereof has been issued, and no proceedings for that purpose have been instituted or are pending or threatened by any securities or other governmental authority (including, without limitation, the Commission).

6. No order suspending the effectiveness of the Registration Statement or the qualification or registration of the Placement Shares under the securities or Blue Sky laws of any jurisdiction are in effect and no proceeding for such purpose is pending before, or threatened, to the Company's knowledge or in writing by, any securities or other governmental authority (including, without limitation, the Commission).

The undersigned has executed this Representation Date Certificate as of the date first written above.

**CASSAVA SCIENCES, INC.**

By: \_\_\_\_\_

Name:

Title:

CASSAVA SCIENCES, INC.

TO

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AS TRUSTEE

INDENTURE

DATED AS OF \_\_\_\_\_, 20

SENIOR DEBT SECURITIES

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Certain Sections of this Indenture relating to Sections 310 through 318, inclusive, of the Trust Indenture Act of 1939:

Section 310(a) (1)	6.9
(a)(2)	6.9
(a)(3)	Not Applicable
(a)(4)	Not Applicable
(b)	6.8, 6.10
Section 311(a)	6.13
(b)	6.13
Section 312(a)	7.1, 7.2
(b)	7.2
(c)	7.2
Section 313(a)	7.3
(b)	7.3
(c)	7.3
(d)	7.3
Section 314(a)	7.4
(a)(4)	10.1, 10.4
(b)	Not Applicable
(c)(1)	1.2
(c)(2)	1.2
(c)(3)	Not Applicable
(d)	Not Applicable
(e)	1.2
Section 315(a)	6.1
(b)	6.2
(c)	6.1
(d)	6.1
(e)	5.14
Section 316(a)	1.1
(a)(1)(A)	5.2, 5.12
(a)(1)(B)	5.13
(a)(2)	Not Applicable
(b)	5.8
(c)	1.4
Section 317(a) (1)	5.3
(a)(2)	5.4
(b)	10.3
Section 318(a)	1.7

NOTE: This reconciliation and tie shall not, for any purpose, be deemed to be a part of the Indenture

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INDENTURE, dated as of , 20 , between Cassava Sciences, Inc., a corporation duly organized and existing under the laws of the State of Delaware (herein called the “Company”), having its principal executive office at 7801 N Capital of Texas Highway, Suite 260, Austin, Texas and , as Trustee (herein called the “Trustee”).

## **RECITALS OF THE COMPANY**

The Company has duly authorized the execution and delivery of this Indenture to provide for the issuance from time to time of its unsecured debentures, notes or other evidences of indebtedness (herein called the “Securities”), to be issued in one or more series as provided in this Indenture.

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

## **NOW, THEREFORE, THIS INDENTURE WITNESSETH:**

For and in consideration of the premises and the purchase of the Securities by the Holders thereof, it is mutually covenanted and agreed, for the equal and proportionate benefit of all Holders of the Securities or of series thereof appertaining, as follows:

## **ARTICLE 1**

### **DEFINITIONS AND OTHER PROVISIONS OF GENERAL APPLICATION**

#### **Section 1.1 Definitions.**

For all purposes of this Indenture, except as otherwise expressly provided or unless the context otherwise requires:

(1)the terms defined in this Article have the meanings assigned to them in this Article and include the plural as well as the singular;

(2)all other terms used herein which are defined in the Trust Indenture Act, either directly or by reference therein, have the meanings assigned to them therein;

(3)all accounting terms not otherwise defined herein have the meanings assigned to them in accordance with generally accepted accounting principles in the United States of America, and, except as otherwise herein expressly provided, the term “generally accepted accounting principles” with respect to any computation required or permitted hereunder shall mean such accounting principles in the United States of America as are generally accepted at the date of such computation;

(4)all references to “\$” refer to the lawful currency of the United States of America;

(5)unless the context otherwise requires, any reference to an “Article” or a “Section” refers to an Article or a Section, as the case may be, of this Indenture; and

(6)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.

“Act,” when used with respect to any Holder, has the meaning specified in Section 1.4.

“Additional Interest” has the meaning specified in Section 5.2(b).

“Affiliate” of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person.

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“Authenticating Agent” means any Person authorized by the Trustee pursuant to Section 6.14 to act on behalf of the Trustee to authenticate Securities of one or more series.

“Board of Directors” means either the board of directors of the Company or any duly authorized committee of that board empowered to act for it with respect to this Indenture.

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

“Business Day,” when used with respect to any Place of Payment, means each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in that Place of Payment are authorized or obligated by law or executive order to close.

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

“Common Stock” includes any stock of any class of the Company which has no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding-up of the Company and which is not subject to redemption by the Company; provided, however, subject to the provisions of Section 14.9, shares issuable upon conversion of Securities shall include only shares of the class designated as Common Stock of the Company at the date of this Indenture or shares of any class or classes resulting from any reclassification or reclassifications thereof and which have no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding-up of the Company and which are not subject to redemption by the Company; provided, further, that if at any time there shall be more than one such resulting class, the shares of each such class then so issuable shall be substantially in the proportion which the total number of shares of such class resulting from all such reclassifications bears to the total number of shares of all such classes resulting from all such reclassifications.

“Company” means the corporation named as the “Company” in the first paragraph of this instrument until a successor Person shall have become such pursuant to the applicable provisions of this Indenture, and thereafter “Company” shall mean such successor Person.

“Company Request” or “Company Order” means a written request or order signed in the name of the Company by its Chairman of the Board, its Vice Chairman of the Board, its Chief Executive Officer, its President or a Vice President, and by its principal financial officer, its Treasurer, an Assistant Treasurer, its Secretary or an Assistant Secretary, and delivered to the Trustee.

“Constituent Person” has the meaning specified in Section 14.9.

“control” when used with respect to any specified Person means the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms “controlling” and “controlled” have meanings correlative to the foregoing.

“Corporate Trust Office” means the corporate trust office of the Trustee at , Attention: Corporate Trust Department, or such other office, designated by the Trustee by written notice to the Company, at which at any particular time its corporate trust business shall be administered.

“corporation” means a corporation, association, company, joint-stock company or business trust.

“Covenant Defeasance” has the meaning specified in Section 13.3.

“Defaulted Interest” has the meaning specified in Section 3.7.

“Defeasance” has the meaning specified in Section 13.2.

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“Depository” means, with respect to Securities of any series issuable in whole or in part in the form of one or more Global Securities, a clearing agency registered under the Exchange Act that is designated to act as Depository for such Securities as contemplated by Section 3.1.

“euro” or “euros” means the currency adopted by those nations participating in the third stage of the economic and monetary union provisions of the Treaty on European Union, signed at Maastricht on February 7, 1992.

“European Economic Area” means the member nations of the European Economic Area pursuant to the Oporto Agreement on the European Economic Area dated May 2, 1992, as amended.

“European Union” means the member nations of the European Union established by the Treaty of European Union, signed at Maastricht on February 7, 1992, which amended the Treaty of Rome establishing the European Community.

“Event of Default” has the meaning specified in Section 5.1.

“Exchange Act” means the Securities Exchange Act of 1934 and any statute successor thereto, in each case as amended from time to time.

“Expiration Date” has the meaning specified in Section 1.4.

“Foreign Government Obligation” means with respect to Securities of any series which are not denominated in the currency of the United States of America (x) any security which is (i) a direct obligation of the government which issued or caused to be issued the currency in which such security is denominated and for the payment of which obligations its full faith and credit is pledged or, with respect to Securities of any series which are denominated in euros, a direct obligation of any member nation of the European Union for the payment of which obligation the full faith and credit of the respective nation is pledged so long as such nation has a credit rating at least equal to that of the highest rated member nation of the European Economic Area, or (ii) an obligation of a Person controlled or supervised by and acting as an agency or instrumentality of a government specified in clause (i) above the timely payment of which is unconditionally guaranteed as a full faith and credit obligation by the such government, which, in either case (i) or (ii), is not callable or redeemable at the option of the issuer thereof, and (y) 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 (x) above 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 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 that evidences all or part of the Securities of any series and bears the legend set forth in Section 2.4 (or such legend as may be specified as contemplated by Section 3.1 for such Securities).

“Holder” means a Person in whose name a Security is registered in the Security Register.

“Indenture” means this instrument as originally executed and as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into pursuant to the applicable provisions hereof, including, for all purposes of this instrument and any such supplemental indenture, the provisions of the Trust Indenture Act that are deemed to be a part of and govern this instrument and any such supplemental indenture, respectively. The term “Indenture” shall also include the terms of particular series of Securities established as contemplated by Section 3.1; provided, however, that if at any time more than one Person is acting as Trustee under this Indenture due to the appointment of one or more separate Trustees for any one or more separate series of Securities, “Indenture” shall mean, with respect to such series of Securities for which any such Person is Trustee, this instrument as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into pursuant to the applicable provisions hereof and shall include the terms of particular series of Securities for which such Person is Trustee established as contemplated by Section 3.1, exclusive, however, of any provisions or terms which relate solely to other series of Securities for which such Person is not Trustee, regardless of when such terms or provisions were adopted, and exclusive of any provisions or terms adopted by means of one or more indentures supplemental hereto executed and delivered after such Person had become such Trustee, but to which such Person, as such Trustee, was not a party; provided, further that in the

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event that this Indenture is supplemented or amended by one or more indentures supplemental hereto which are only applicable to certain series of Securities, the term “Indenture” for a particular series of Securities shall only include the supplemental indentures applicable thereto.

“interest,” when used with respect to an Original Issue Discount Security, which by its terms bears interest only after Maturity, means interest payable after Maturity.

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

“Investment Company Act” means the Investment Company Act of 1940 and any statute successor thereto, in each case as amended from time to time.

“Maturity,” when used with respect to any Security, means the date on which the principal of such Security or an installment of principal becomes due and payable as therein or herein provided, whether at the Stated Maturity or by declaration of acceleration, repurchase at the option of the Holder, upon redemption or otherwise.

“Non-electing Share” has the meaning specified in Section 14.9.

“Notice of Default” means a written notice of the kind specified in Section 5.1(4).

“Officers’ Certificate” means a certificate signed by the Chairman of the Board, a Vice Chairman of the Board, the Chief Executive Officer, the President or a Vice President, and by the principal financial officer, the Treasurer, an Assistant Treasurer, the Secretary or an Assistant Secretary, of the Company, and delivered to the Trustee. One of the officers signing an Officers’ Certificate given pursuant to Section 10.4 shall be the principal executive, financial or accounting officer of the Company.

“Opinion of Counsel” means a written opinion of counsel, who may be counsel for, or an employee of, the Company, and who shall be reasonably acceptable to the Trustee.

“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 5.2.

“Outstanding,” when used with respect to Securities, means, as of the date of determination, all Securities theretofore authenticated and delivered under this Indenture, except

- (1) Securities theretofore canceled by the Trustee or delivered to the Trustee for cancellation;
- (2) Securities for whose payment or redemption money in the necessary amount has been theretofore deposited with the Trustee or any Paying Agent (other than the Company) in trust or set aside and segregated in trust by the Company (if the Company shall act as its own Paying Agent) for the Holders of such Securities; provided that, if such Securities are to be redeemed, notice of such redemption has been duly given pursuant to this Indenture or provision therefor satisfactory to the Trustee has been made;
- (3) Securities as to which Defeasance has been effected pursuant to Section 13.2; and
- (4) Securities which have been paid pursuant to Section 3.6 or in exchange for or in lieu of which other Securities have been authenticated and delivered pursuant to this Indenture, other than any such Securities in respect of which there shall have been presented to the Trustee proof satisfactory to it that such Securities are held by a bona fide purchaser in whose hands such Securities are valid obligations of the Company;

provided, however, that in determining whether the Holders of the requisite principal amount of the Outstanding Securities have given, made or taken any request, demand, authorization, direction, notice, consent, waiver or other action hereunder as of any date, (A) the principal amount of an Original Issue Discount Security which shall be deemed to be Outstanding shall be the amount of the principal thereof which would be due and payable as of such date upon acceleration of the Maturity thereof to such date pursuant to Section 5.2, (B) if, as of such date, the principal amount payable at the Stated Maturity of a

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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 3.1, (C) the principal amount of a Security denominated in one or more non-U.S. dollar 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 3.1, 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), and (D) Securities owned by the Company or any other obligor upon the Securities shall be disregarded and deemed not to be Outstanding, except that, in determining whether the Trustee shall be protected in relying upon any such request, demand, authorization, direction, notice, consent, waiver or other action, only Securities which the Trustee knows to be 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 Company or any other obligor upon the Securities.

"Paying Agent" means any Person authorized by the Company to pay the principal of or any premium or interest on any Securities on behalf of the Company.

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

"Place of Payment," when used with respect to the Securities of any series, means the place or places where the principal of and any premium and interest on the Securities of that series are payable as specified as contemplated by Section 3.1.

"Predecessor Security" of any particular Security means every previous Security evidencing all or a portion of the same debt as that evidenced by such particular Security; and, for the purposes of this definition, any Security authenticated and delivered under Section 3.6 in exchange for or in lieu of a mutilated, destroyed, lost or stolen Security shall be deemed to evidence the same debt as the mutilated, destroyed, lost or stolen Security.

"Record Date" means any Regular Record Date or Special Record Date.

"Redemption Date," when used with respect to any Security to be redeemed, means the date fixed for such redemption by or pursuant to this Indenture.

"Redemption Price," when used with respect to any Security to be redeemed, means the price at which it is to be redeemed pursuant to this Indenture.

"Regular Record Date" for the interest payable on any Interest Payment Date on the Securities of any series means the date specified for that purpose as contemplated by Section 3.1.

"Reporting Default" has the meaning specified in Section 5.2(b).

"Responsible Officer" means, when used with respect to the Trustee, an officer of the Trustee in the Corporate Trust Office assigned and duly authorized by the Trustee to administer its corporate trust matters.

"Securities" has the meaning stated in the first recital of this Indenture and more particularly means any Securities authenticated and delivered under this Indenture.

"Securities Act" means the Securities Act of 1933 and any statute successor thereto, in each case as amended from time to time.

"Security Register" and "Security Registrar" have the respective meanings specified in Section 3.5.

"Special Record Date" for the payment of any Defaulted Interest means a date fixed by the Trustee pursuant to Section 3.7.

"Stated Maturity," when used with respect to any Security or any installment of principal thereof or interest thereon, means the date specified in such Security as the fixed date on which the principal of such Security or such installment of

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principal or interest is due and payable.

“Subsidiary” means a Person of which at least a majority of the outstanding voting stock having the power to elect a majority of the board of directors of such Person (in the case of a corporation) is, or of which at least a majority of the equity interests (in the case of a Person which is not a corporation) are, at the time owned, directly or indirectly, by the Company or by one or more other Subsidiaries, or by the Company and one or more other Subsidiaries. For the purposes of this definition, “voting stock” means stock or similar interests to the Company which ordinarily has or have voting power for the election of directors or persons performing similar functions, whether at all times or only so long as no senior class of stock or other interests has or have such voting power by reason of any contingency.

“Trust Indenture Act” means the Trust Indenture Act of 1939 as in force at the date as of which this instrument was executed; provided, however, that in the event the Trust Indenture Act of 1939 is amended after such date, “Trust Indenture Act” means, to the extent required by any such amendment, the Trust Indenture Act of 1939 as so amended.

“Trustee” means the Person named as the “Trustee” in the first paragraph of this instrument until a successor Trustee shall have become such pursuant to the applicable provisions of this Indenture, and thereafter “Trustee” shall mean or include each Person who is then a Trustee hereunder, and if at any time there is more than one such Person, “Trustee” as used with respect to the Securities of any series shall mean the Trustee with respect to Securities of that series.

“U.S. Government Obligation” means (x) any security which is (i) a direct obligation of the United States of America for the payment of which the full faith and credit of the United States of America is pledged or (ii) 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, which, in either case (i) or (ii), is not callable or redeemable at the option of the issuer thereof, and (y) any depositary receipt issued by a bank (as defined in Section 3(a)(2) of the Securities Act) as custodian with respect to any U.S. Government Obligation which is specified in clause (x) above and held by such bank for the account of the holder of such depositary receipt, or with respect to any specific payment of principal or of interest on any U.S. 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 U.S. Government Obligation or the specific payment of principal or interest evidenced by such depositary receipt.

“Vice President,” when used with respect to the Company 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 “vice president.”

## **Section 1.2 Compliance Certificates and Opinions.**

Upon any application or request by the Company to the Trustee to take any action under any provision of this Indenture, the Company shall furnish to the Trustee such certificates and opinions as may be required under the Trust Indenture Act. Each such certificate or opinion shall be given in the form of an Officers’ Certificate, if to be given by an officer of the Company, or an Opinion of Counsel, if to be given by counsel, and shall comply with the requirements of the Trust Indenture Act and any other requirements set forth in this Indenture.

Every certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture shall include,

(1) a statement that each individual signing such certificate or opinion has read such covenant or condition and the definitions herein relating thereto;

(2) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;

(3) a statement that, in the opinion of each such individual, such individual has made such examination or investigation as is necessary to enable such individual to express an informed opinion as to whether or not such covenant or condition has been complied with; and

(4) a statement as to whether, in the opinion of each such individual, such condition or covenant has

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been complied with.

### **Section 1.3 Form of Documents Delivered to Trustee.**

In any case where several matters are required to be certified by, or covered by an opinion of, any specified Person, it is not necessary that all such matters be certified by, or covered by the opinion of, only one such Person, or that they be so certified or covered by only one document, but one such Person may certify or give an opinion with respect to some matters and one or more other such Persons as to other matters, and any such Person may certify or give an opinion as to such matters in one or several documents.

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

Where any Person is required to make, give or execute two or more applications, requests, consents, certificates, statements, opinions or other instruments under this Indenture, they may, but need not, be consolidated and form one instrument.

### **Section 1.4 Acts of Holders; Record Dates.**

Any request, demand, authorization, direction, notice, consent, waiver or other action provided or permitted by this Indenture to be given, made or taken by Holders may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such Holders 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 and, where it is hereby expressly required, to the Company. The Trustee shall promptly deliver to the Company copies of all such instrument or instruments delivered to the Trustee. Such instrument or instruments (and the action embodied therein and evidenced thereby) are herein sometimes referred to as the "Act" of the Holders signing such instrument or instruments. Proof of execution of any such instrument or of a writing appointing any such agent shall be sufficient for any purpose of this Indenture and (subject to Section 6.1) conclusive in favor of the Trustee and the Company, if made in the manner provided in this Section.

The fact and date of the execution by any Person of any such instrument or writing may be proved by the affidavit of a witness of such execution or by a certificate of a notary public or other officer authorized by law to take acknowledgments of deeds, certifying that the individual signing such instrument or writing acknowledged to such witness, notary public or other officer the execution thereof. Where such execution is by a signer acting in a capacity other than such signor's individual capacity, such certificate or affidavit shall also constitute sufficient proof of such signor's authority. The fact and date of the execution of any such instrument or writing, or the authority of the Person executing the same, may also be proved in any other manner that the Trustee deems sufficient.

The ownership of Securities shall be proved by the Security Register.

Any request, demand, authorization, direction, notice, consent, waiver or other Act of the Holder of any Security shall bind every future Holder of the same Security and the Holder of every Security issued upon the registration of transfer thereof or in exchange therefor or in lieu thereof in respect of anything done, omitted or suffered to be done by the Trustee or the Company in reliance thereon, whether or not notation of such action is made upon such Security.

The Company may set any day as a record date for the purpose of determining the Holders of Outstanding Securities of any series entitled to give, make or take any request, demand, authorization, direction, vote, notice, consent, waiver or other action provided or permitted by this Indenture to be given, made or taken by Holders of Securities of such series, provided that the Company may not set a record date for, and the provisions of this paragraph shall not apply with respect to, the giving or making of any notice, declaration, request or direction referred to in the next paragraph. If any record date is set

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pursuant to this paragraph, the Holders of Outstanding Securities of the relevant series on such record date, and no other Holders, shall be entitled to take the relevant action, whether or not such Holders remain Holders after such record date; provided that no such action shall be effective hereunder unless taken on or prior to the applicable Expiration Date by Holders of the requisite principal amount of Outstanding Securities of such series on such record date. Nothing in this paragraph shall be construed to prevent the Company from setting a new record date for any action for which a record date has previously been set pursuant to this paragraph (whereupon the record date previously set shall automatically and with no action by any Person be canceled and of no effect), and nothing in this paragraph shall be construed to render ineffective any action taken by Holders of the requisite principal amount of Outstanding Securities of the relevant series on the date such action is taken. Promptly after any record date is set pursuant to this paragraph, the Company, at its own expense, shall cause notice of such record date, the proposed action by Holders and the applicable Expiration Date to be given to the Trustee in writing and to each Holder of Securities of the relevant series in the manner set forth in Section 1.6.

The Trustee may set any day as a record date for the purpose of determining the Holders of Outstanding Securities of any series entitled to join in the giving or making of (i) any Notice of Default, (ii) any declaration of acceleration referred to in Section 5.2, (iii) any request to institute proceedings referred to in Section 5.7(2) or (iv) any direction referred to in Section 5.12, in each case with respect to Securities of such series. If any record date is set pursuant to this paragraph, the Holders of Outstanding Securities of such series on such record date, and no other Holders, shall be entitled to join in such notice, declaration, request or direction, whether or not such Holders remain Holders after such record date; provided that no such action shall be effective hereunder unless taken on or prior to the applicable Expiration Date by Holders of the requisite principal amount of Outstanding Securities of such series on such record date. Nothing in this paragraph shall be construed to prevent the Trustee from setting a new record date for any action for which a record date has previously been set pursuant to this paragraph (whereupon the record date previously set shall automatically and with no action by any Person be canceled and of no effect), and nothing in this paragraph shall be construed to render ineffective any action taken by Holders of the requisite principal amount of Outstanding Securities of the relevant series on the date such action is taken. Promptly after any record date is set pursuant to this paragraph, the Trustee, at the Company's expense, shall cause notice of such record date, the proposed action by Holders and the applicable Expiration Date to be given to the Company in writing and to each Holder of Securities of the relevant series in the manner set forth in Section 1.6.

With respect to any record date set pursuant to this Section, the party hereto which sets such record dates may designate any day as the "Expiration Date" and from time to time may change the Expiration Date to any earlier or later day; provided that no such change shall be effective unless notice of the proposed new Expiration Date is given to the other party hereto in writing, and to each Holder of Securities of the relevant series in the manner set forth in Section 1.6, on or prior to the existing Expiration Date. If an Expiration Date is not designated with respect to any record date set pursuant to this Section, the party hereto which set such record date shall be deemed to have initially designated the 180th day after such record date as the Expiration Date with respect thereto, subject to its right to change the Expiration Date as provided in this paragraph. Notwithstanding the foregoing, no Expiration Date shall be later than the 180th day after the applicable record date.

Without limiting the foregoing, a Holder entitled hereunder to take any action hereunder with regard to any particular Security may do so with regard to all or any part of the principal amount of such Security or by one or more duly appointed agents each of which may do so pursuant to such appointment with regard to all or any part of such principal amount.

#### **Section 1.5 Notices, etc., to Trustee and Company.**

Any request, demand, authorization, direction, notice, consent, waiver or Act of Holders or other document provided or permitted by this Indenture to be made upon, given or furnished to, or filed with, (1) the Trustee by any Holder or by the Company shall be sufficient for every purpose hereunder if made, given, furnished or filed in writing (or by facsimile transmissions, provided that oral confirmation of receipt shall have been received) to or with the Trustee at its Corporate Trust Office, Attention: Corporate Trust Department, or (2) the Company by the Trustee or by any Holder shall be sufficient for every purpose hereunder (unless otherwise herein expressly provided) if in writing and mailed, first-class postage prepaid, personally delivered or sent via overnight courier to the Company addressed to it at the address of its principal office specified in the first paragraph of this instrument or at any other address previously furnished in writing to the Trustee by the Company, Attention: Chief Financial Officer.

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## **Section 1.6 Notice to Holders; Waiver.**

Where this Indenture provides for notice to Holders of any event, such notice shall be sufficiently given (unless otherwise herein expressly provided) if in writing and mailed, first-class postage prepaid, or delivered by hand or overnight courier, to each Holder affected by such event, at its address as it appears in the Security Register, 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 mail or deliver by hand or overnight courier any notice, nor any defect in any notice so mailed or delivered by hand or overnight courier, to any particular Holder shall affect the sufficiency of such notice with respect to other Holders. Where this Indenture provides for notice in any manner, such notice may be waived in writing by the Person entitled to receive such notice, either before or after the event, and such waiver shall be the equivalent of such notice. Waivers of notice by Holders shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

In case by reason of the suspension of regular mail service or by reason of any other cause it shall be impracticable to give such notice by mail, then such notification as shall be made with the approval of the Trustee shall constitute a sufficient notification for every purpose hereunder.

## **Section 1.7 Conflict with Trust Indenture Act.**

If any provision hereof limits, qualifies or conflicts with a provision of the Trust Indenture Act that is required under the Trust Indenture Act to be a part of and govern this Indenture, the latter provision shall control. If any provision of this Indenture modifies or excludes any provision of the Trust Indenture Act, which may be so modified or excluded, the latter provision shall be deemed to apply to this Indenture as so modified or to be excluded, as the case may be.

## **Section 1.8 Effect of Headings and Table of Contents.**

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

## **Section 1.9 Successors and Assigns.**

All covenants and agreements in this Indenture by the Company shall bind its successors and assigns, whether so expressed or not.

## **Section 1.10 Separability Clause.**

In case any provision in this Indenture or in the Securities shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

## **Section 1.11 Benefits of Indenture.**

Nothing in this Indenture or in the Securities, express or implied, shall give to any Person, other than the parties hereto and their successors hereunder and the Holders, any benefit or any legal or equitable right, remedy or claim under this Indenture.

## **Section 1.12 Governing Law.**

**THIS INDENTURE AND THE SECURITIES SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.**

## **Section 1.13 Legal Holidays.**

In any case where any Interest Payment Date, Redemption Date or Stated Maturity of any Security or the last date on which a Holder has the right to convert a Security at a particular conversion price or conversion rate, as the case may be, shall not be a Business Day at any Place of Payment, then (notwithstanding any other provision of this Indenture or of the Securities (other than a provision of any Security which specifically states that such provision shall apply in lieu of this

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Section)) payment of interest or principal (and premium, if any) or, if applicable to a particular series of Securities, conversion need not be made at such Place of Payment on such date, but may be made on the next succeeding Business Day at such Place of Payment with the same force and effect as if made on the Interest Payment Date or Redemption Date, at the Stated Maturity or on such last day for conversion, as the case may be.

#### **Section 1.14 Indenture and Securities Solely Corporate Obligations.**

No recourse for the payment of the principal of or premium, if any, or interest on any Security, or for any claim based thereon or otherwise in respect thereof, and no recourse under or upon any obligation, covenant or agreement of the Company in this Indenture or in any supplemental indenture or in any Security, or because of the creation of any indebtedness represented thereby, shall be had against any incorporator, stockholder, employee, agent, officer, or director or subsidiary, as such, past, present or future, of the Company or of any successor corporation, either directly or through the Company or any 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 all such liability is hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issue of the Securities.

#### **Section 1.15 Indenture May be Executed in Counterparts.**

This instrument 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.

### **ARTICLE 2**

#### **SECURITY FORMS**

##### **Section 2.1 Forms Generally.**

The Securities of each series shall be in substantially the form set forth in this Article, or in such other form as shall be established by or pursuant to a Board Resolution 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 such letters, numbers or other marks of identification and such legends or endorsements placed thereon as may be required to comply with the rules of any securities exchange or Depositary therefor or as may, consistently herewith, be determined by the officers executing such Securities, as evidenced by their execution thereof. If the form of Securities of any series is established by action taken pursuant to a Board Resolution, a copy of an appropriate record of such action shall be certified by the Secretary or an Assistant Secretary of the Company and delivered to the Trustee at or prior to the delivery of the Company Order contemplated by Section 3.3 for the authentication and delivery of such Securities. Any such Board Resolution or record of such action shall have attached thereto a true and correct copy of the form of Security referred to therein approved by or pursuant to such Board Resolution.

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 2.2 Form of Face of Security.**

**[INSERT ANY LEGEND REQUIRED BY THE INTERNAL REVENUE CODE AND THE REGULATIONS THEREUNDER.]**

**CASSAVA SCIENCES, INC.**

NO. \_\_\_\_\_

\$ \_\_\_\_\_  
CUSIP: \_\_\_\_\_

Cassava Sciences, Inc., a corporation duly organized and existing under the laws of Delaware (herein called the “Company,” which term includes any successor Person under the Indenture hereinafter referred to), for value received, hereby promises to pay to , or registered assigns, the principal sum of dollars on **[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, semi-annually on and in each year, commencing , at the rate of % per annum, until the principal hereof is paid or made available for payment **[if applicable, insert —** , provided that any principal and premium, and any such installment of interest, which is overdue shall bear interest at the rate of % per annum (to the extent that the payment of such interest shall be legally enforceable), from the dates such amounts are due until they are paid or made available for payment, and such interest shall be payable on demand]. The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in such Indenture, be paid to the Person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on the Regular 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. Any such interest not so punctually paid or duly provided for will forthwith cease to be payable to the Holder on such Regular Record Date and may either be paid to the Person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on a Special Record Date for the payment of such Defaulted Interest to be fixed by the Trustee, notice whereof shall be given to Holders of Securities of this series not less than 10 days prior to such Special Record Date, or be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Securities of this series may be listed, and upon such notice as may be required by such exchange, all as more fully provided in said Indenture].

**[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 Stated Maturity and in such case the overdue principal and any overdue premium shall bear interest at the rate of % per annum (to the extent that the payment of such interest shall be legally enforceable), from the dates such amounts are due until they are paid or made available for payment. Interest on any overdue principal or premium shall be payable on demand. Any such interest on overdue principal or premium which is not paid on demand shall bear interest at the rate of % per annum (to the extent that the payment of such interest on interest shall be legally enforceable), from the date of such demand until the amount so demanded is paid or made available for payment. Interest on any overdue interest shall be payable on demand.] Payment of the principal of (and premium, if any) and **[if applicable, insert —** any such] interest on this Security will be made at the office or agency of the Company maintained for that purpose in , in such coin or currency of the United States of America as at the time of payment is legal tender for payment of public and private debts **[if applicable, insert —**; provided, however, that at the option of the Company payment of interest may be made by check mailed to the address of the Person entitled thereto as such address shall appear in the Security Register].

Reference is hereby made to the further provisions of this Security set forth on the reverse hereof, which further provisions shall for all purposes have the same effect as if set forth at this place.

Unless the certificate of authentication hereon has been executed by the Trustee referred to on the reverse hereof by manual signature, this Security shall not be entitled to any benefit under the Indenture or be valid or obligatory for any purpose.

IN WITNESS WHEREOF, the Company has caused this instrument to be duly executed.

Dated: \_\_\_\_\_

CASSAVA SCIENCES, INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

ATTEST:

\_\_\_\_\_

\_\_\_\_\_

Section 2.3 Form of Reverse of Security.

This Security is one of a duly authorized issue of securities of the Company (herein called the “Securities”), issued and to be issued in one or more series under an Indenture, dated as of , 200 (herein called the “Indenture,” which term shall have the meaning assigned to it in such instrument), between the Company and , as Trustee (herein called the “Trustee,” which term includes any successor trustee under the Indenture), and reference is hereby made to the Indenture and all indentures supplemental thereto for a statement of the respective rights, limitations of rights, duties and immunities thereunder of the Company, the Trustee and the Holders of the Securities and of the terms upon which the Securities are, and are to be, authenticated and delivered. This Security is one of the series designated on the face hereof [if applicable, insert — , limited in aggregate principal amount to \$ ].

[If applicable, insert — The Securities of this series are subject to redemption upon not less than [if applicable, insert — 30] days’ notice by mail, [if applicable, insert — (1) on in any year commencing with the year and ending with the year through operation of the sinking fund for this series at a Redemption Price equal to 100% of the principal amount, and (2)] at any time [if applicable, insert — on or after , 20 ], as a whole or in part, at the election of the Company, at the following Redemption Prices (expressed as percentages of the principal amount): If redeemed [if applicable, insert — on or before , %, and if redeemed] during the 12-month period beginning of the years indicated,

Year	Redemption Price	Year	Redemption Price

and thereafter at a Redemption Price equal to % of the principal amount, together in the case of any such redemption [if applicable, insert — (whether through operation of the sinking fund or otherwise)] with accrued interest to the Redemption Date, but interest installments whose Stated Maturity is on or prior to such Redemption Date will be payable to the Holders of such Securities, or one or more Predecessor Securities, of record at the close of business on the relevant Record Dates referred to on the face hereof, all as provided in the Indenture.]

[If applicable, insert — The Securities of this series are subject to redemption upon not less than [if applicable, insert — 30] days’ notice by mail, (1) on in any year commencing with the year and ending with the year through operation of the sinking fund for this series at the Redemption Prices for redemption through operation of the sinking fund (expressed as percentages of the principal amount) set forth in the table below, and (2) at any time [if applicable, insert — on or after ], as a whole or in part, at the election of the Company, at the Redemption Prices for redemption otherwise than through operation of the sinking fund (expressed as percentages of the principal amount) set forth in the table below: If redeemed during the 12-month period beginning of the years indicated,

Year	Redemption Price For Redemption Through Operation of the Sinking Fund	Year	Redemption Price For Redemption Otherwise Than Through Operation of the Sinking Fund

and thereafter at a Redemption Price equal to % of the principal amount, together in the case of any such redemption (whether through operation of the sinking fund or otherwise) with accrued interest to the Redemption Date, but interest installments whose Stated Maturity is on or prior to such Redemption Date will be payable to the Holders of such Securities, or one or more Predecessor Securities, of record at the close of business on the relevant Record Dates referred to on the face hereof, all as provided in the Indenture.]

[If applicable, insert — Notwithstanding the foregoing, the Company may not, prior to , redeem any Securities of this series as contemplated by [if applicable, insert — clause (2) of] the preceding paragraph as a part of, or in anticipation of, any refunding operation by the application, directly or indirectly, of moneys borrowed having an interest cost to the Company (calculated in accordance with generally accepted financial practice) of less than % per annum.]

[If applicable, insert — The sinking fund for this series provides for the redemption on , in each year beginning with the year and ending with the year of [if applicable, insert — not less than \$ (“mandatory sinking fund”) and not more than] \$ aggregate principal amount of Securities of this series. Securities of this series acquired or redeemed by the Company otherwise than through [if applicable, insert — mandatory] sinking fund payments may be credited against subsequent [if applicable, insert — mandatory] sinking fund payments otherwise required to be made [if applicable, insert —, in the inverse order in which they become due].]

[If the Security is subject to redemption of any kind, insert — In the event of redemption of this Security in part only, a new Security or Securities of this series and of like tenor for the unredeemed portion hereof will be issued in the name of the Holder hereof upon the cancellation hereof.]

[If applicable, insert — The Indenture contains provisions for defeasance at any time of [the entire indebtedness of this Security] [or] [certain restrictive covenants and Events of Default with respect to this Security] [, in each case] upon compliance with certain conditions set forth in the Indenture.]

[If the Security is convertible into other securities of the Company, specify the conversion features.]

[If the Security is not an Original Issue Discount Security, insert — If an Event of Default with respect to Securities of this series shall occur and be continuing, the principal of the Securities of this series may be declared due and payable in the manner and with the effect provided in the Indenture.]

[If the Security is an Original Issue Discount Security, insert — If an Event of Default with respect to Securities of this series shall occur and be continuing, an amount of principal of the Securities of this series may be declared due and payable in the manner and with the effect provided in the Indenture. Such amount shall be equal to — insert formula for determining the amount. Upon payment (i) of the amount of principal so declared due and payable and (ii) of interest on any overdue principal, premium and interest (in each case to the extent that the payment of such interest shall be legally enforceable), all of the Company’s obligations in respect of the payment of the principal of and premium and interest, if any, on the Securities of this series shall terminate.]

The Indenture permits, with certain exceptions as therein provided, the amendment thereof and the modification of the rights and obligations of the Company and the rights of the Holders of the Securities of each series to be affected under the Indenture at any time by the Company and the Trustee with the consent of the Holders of more than 50% in principal amount of the Securities at the time Outstanding of each series to be affected. The Indenture also contains provisions permitting the Holders of specified percentages in principal amount of the Securities of each series at the time Outstanding, on behalf of the Holders of all Securities of such series, to waive compliance by the Company with certain provisions of the Indenture and certain past defaults under the Indenture and their consequences. Any such consent or waiver by the Holder of this Security shall be conclusive and binding upon such Holder and upon all future Holders of this Security and of any Security issued upon the registration of transfer hereof or in exchange herefor or in lieu hereof, whether or not notation of such consent or waiver is made upon this Security.

As provided in and subject to the provisions of the Indenture, the Holder of this Security shall not have the right to institute any proceeding with respect to the Indenture or for the appointment of a receiver or trustee or for any other remedy thereunder, unless such Holder shall have previously given the Trustee written notice of a continuing Event of Default with respect to the Securities of this series, the Holders of not less than a majority in principal amount of the Securities of this series at the time Outstanding shall have made written request to the Trustee to institute proceedings in respect of such Event of Default as Trustee and offered the Trustee reasonable indemnity, and the Trustee shall not have received from the Holders of a majority in principal amount of Securities of this series at the time Outstanding a direction inconsistent with such request, and shall have failed to institute any such proceeding, for 60 days after receipt of such notice, request and offer of indemnity. The foregoing shall not apply to any suit instituted by the Holder of this Security for the enforcement of any payment of principal hereof or any premium or interest hereon on or after the respective due dates expressed herein.

No reference herein to the Indenture and no provision of this Security or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of and any premium and interest on this Security at the times, place and rate, and in the coin or currency, herein prescribed.

As provided in the Indenture and subject to certain limitations therein set forth, the transfer of this Security is

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registrable in the Security Register, upon surrender of this Security for registration of transfer at the office or agency of the Company in any place where the principal of and any premium and interest on this Security are payable, duly endorsed by, or accompanied by a written instrument of transfer in form satisfactory to the Company and the Security Registrar duly executed by, the Holder hereof or its attorney duly authorized in writing, and thereupon one or more new Securities of this series and of like tenor, of authorized denominations and for the same aggregate principal amount, will be issued to the designated transferee or transferees.

The Securities of this series are issuable only in registered form without coupons in denominations of \$ and any integral multiple thereof. As provided in the Indenture and subject to certain limitations therein set forth, Securities of this series are exchangeable for a like aggregate principal amount of Securities of this series and of like tenor of a different authorized denomination, as requested by the Holder surrendering the same.

No service charge shall be made for any such registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.

Prior to due presentment of this Security for registration of transfer, the Company, the Trustee and any agent of the Company or the Trustee may treat the Person in whose name this Security is registered as the owner hereof for all purposes, whether or not this Security be overdue, and neither the Company, the Trustee nor any such agent shall be affected by notice to the contrary.

All terms used in this Security that are defined in the Indenture shall have the meanings assigned to them in the Indenture.

#### **Section 2.4 Form of Legend for Global Securities.**

Unless otherwise specified as contemplated by Section 3.1 for the Securities evidenced thereby, every Global Security authenticated and delivered hereunder shall bear a legend in substantially the following form:

**THIS SECURITY IS A GLOBAL SECURITY WITHIN THE MEANING OF THE INDENTURE  
HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF A DEPOSITARY OR A NOMINEE  
THEREOF. THIS SECURITY MAY NOT BE EXCHANGED IN WHOLE OR IN PART FOR A SECURITY  
REGISTERED, AND NO TRANSFER OF THIS SECURITY IN WHOLE OR IN PART MAY BE REGISTERED, IN  
THE NAME OF ANY PERSON OTHER THAN SUCH DEPOSITARY OR A NOMINEE THEREOF, EXCEPT IN  
THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE.**

#### **Section 2.5 Form of Trustee's Certificate of Authentication.**

The Trustee's certificates of authentication shall be in substantially the following form:

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

\_\_\_\_\_,  
as Trustee

By: \_\_\_\_\_  
Authorized Officer

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## Section 2.6 Form of Conversion Notice.

Conversion notices shall be in substantially the following form:  
To Cassava Sciences, Inc.:

The undersigned owner of this Security hereby irrevocably exercises the option to convert this Security, or portion hereof (which is \$1,000 or an integral multiple thereof) below designated, into shares of Common Stock of the Company in accordance with the terms of the Indenture referred to in this Security, and directs that the shares issuable and deliverable upon the conversion, together with any check in payment for fractional shares and any Securities representing any unconverted principal amount hereof, be issued and delivered to the registered holder hereof unless a different name has been indicated below. If this Notice is being delivered on a date after the close of business on a Regular Record Date and prior to the opening of business on the related Interest Payment Date (unless this Security or the portion thereof being converted has been called for redemption on a Redemption Date during the period beginning at the close of business on a Regular Record Date and ending at the opening of business on the first Business Day after the next succeeding Interest Payment Date, or if such Interest Payment Date is not a Business Day, the second such Business Day), this Notice is accompanied by payment, in funds acceptable to the Company, of an amount equal to the interest payable on such Interest Payment Date of the principal of this Security to be converted. If shares are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect hereto. Any amount required to be paid by the undersigned on account of interest accompanies this Security.

Principal Amount to be Converted  
(in an integral multiple of \$1,000, if less than all)

U.S. \$\_\_\_\_\_

Dated: \_\_\_\_\_

Signature(s) must be guaranteed by an eligible guarantor institution (banks, stock brokers, savings and loan associations and credit unions with membership in an approved signature guarantee medallion program) pursuant to Securities and Exchange Commission Rule 17Ad-15.

\_\_\_\_\_  
Signature Guaranty

Fill in for registration of shares of Common Stock and Security if to be issued otherwise than to the registered Holder.

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
Social Security or Other Taxpayer Identification  
Number

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
Please print Name and Address  
(including zip code)

[The above conversion notice is to be modified, as appropriate, for conversion into other securities or property of the Company.]

\_\_\_\_\_

## ARTICLE 3

### THE SECURITIES

#### Section 3.1 Amount Unlimited; Issuable in Series.

The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more series. There shall be established in or pursuant to a Board Resolution and, subject to Section 3.3, set forth, or determined in the manner provided, in an Officers' Certificate, or established in one or more indentures supplemental hereto, prior to the issuance of Securities of any series,

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

(2) any limit upon the aggregate principal amount of the Securities of the series which may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the series pursuant to Section 3.4, 3.5, 3.6, 9.6 or 11.7 and except for any Securities which, pursuant to Section 3.3, are deemed never to have been authenticated and delivered hereunder);

(3) the Person to whom any interest on a Security of the series shall be payable, if other than the Person in whose name that Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest;

(4) the date or dates on which the principal of any Securities of the series is payable;

(5) the rate or rates (which may be fixed or variable) at which any Securities of the series shall bear interest, if any, the date or dates from which any such interest shall accrue, the Interest Payment Dates on which any such interest shall be payable and the Regular Record Date for any such interest payable on any Interest Payment Date (or the method for determining the dates and rates);

(6) the place or places where the principal of and any premium and interest on any Securities of the series shall be payable;

(7) the period or periods within which, the price or prices at which and the terms and conditions upon which any Securities of the series may be redeemed, in whole or in part, at the option of the Company and, if other than by a Board Resolution, the manner in which any election by the Company to redeem the Securities shall be evidenced;

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

(9) if other than denominations of \$1,000 and any integral multiple thereof, the denominations in which any Securities of the series shall be issuable;

(10) if the amount of principal of or any premium or interest on any Securities of the series may be determined with reference to an index or pursuant to a formula, the manner in which such amounts shall be determined;

(11) if other than the currency of the United States of America, the currency, currencies or currency units in which the principal of or any premium or interest on any Securities of the series shall be payable and the manner of determining the equivalent thereof in the currency of the United States of America for any purpose, including for purposes of the definition of "Outstanding" in Section 1.1;

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(12) if the principal of or any premium or interest on any Securities of the series is to be payable, at the election of the Company or the Holder thereof, in one or more currencies or currency units other than that or those in which such Securities are stated to be payable, the currency, currencies or currency units in which the principal of or any premium or interest on such Securities as to which such election is made shall be payable, the periods within which and the terms and conditions upon which such election is to be made and the amount so payable (or the manner in which such amount shall be determined);

(13) if other than the entire principal amount thereof, the portion of the principal amount of any Securities of the series which shall be payable upon declaration of acceleration of the Maturity thereof pursuant to Section 5.2;

(14) if the principal amount payable at the Stated Maturity of any Securities of the series will not be determinable as of any one or more dates prior to the Stated Maturity, the amount which shall be deemed to be the principal amount of such Securities as of any such date for any purpose thereunder or hereunder, including the principal amount thereof which shall be due and payable upon any Maturity other than the Stated Maturity or which shall be deemed to be Outstanding as of any date prior to the Stated Maturity (or, in any such case, the manner in which such amount deemed to be the principal amount shall be determined);

(15) if applicable, that the Securities of the series, in whole or any specified part, shall be defeasible pursuant to Section 13.2 or Section 13.3 or both such Sections, or any other defeasance provisions applicable to any Securities of the series, and, if other than by a Board Resolution, the manner in which any election by the Company to defease such Securities shall be evidenced;

(16) if applicable, the terms of any right to convert or exchange Securities of the series into shares of Common Stock of the Company or other securities or property;

(17) if applicable, that any Securities of the series shall be issuable in whole or in part in the form of one or more Global Securities and, in such case, the respective Depositaries for such Global Securities, the form of any legend or legends which shall be borne by any such Global Security in addition to or in lieu of that set forth in Section 2.4 and any circumstances in addition to or in lieu of those set forth in Form of clause (2) of the last paragraph of Section 3.5 in which any such Global Security may be exchanged in whole or in part for Securities registered, and any transfer of such Global Security in whole or in part may be registered, in the name or names of Persons other than the Depositary for such Global Security or a nominee thereof;

(18) any addition to or change in the Events of Default which applies to any Securities of the series and any change in the right of the Trustee or the requisite Holders of such Securities to declare the principal amount thereof due and payable pursuant to Section 5.2;

(19) any addition to or change in the covenants set forth in Article 10 which applies to Securities of the series;

(20) any Authenticating Agents, Paying Agents, Security Registrars or such other agents necessary in connection with the issuance of the Securities of such series, including, without limitation, exchange rate agents and calculation agents;

(21) if applicable, the terms of any security that will be provided for a series of Securities, including provisions regarding the circumstances under which collateral may be released or substituted;

(22) if applicable, the terms of any guaranties for the Securities and any circumstances under which there may be additional obligors on the Securities;

(23) any other terms of the series (which terms shall not be inconsistent with the provisions of this Indenture, except as permitted by Section 9.1(5)).

All Securities of any one series shall be substantially identical except as to denomination and except as may otherwise be provided in or pursuant to the Board Resolution referred to above and (subject to Section 3.3) set forth, or

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determined in the manner provided, in the Officers' Certificate referred to above or in any such indenture supplemental hereto.

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

### **Section 3.2 Denominations.**

The Securities of each series shall be issuable only in registered form without coupons and only in such denominations as shall be specified as contemplated by Section 3.1. In the absence of any such specified denomination with respect to the Securities of any series, the Securities of such series shall be issuable in denominations of \$1,000 and any integral multiple thereof.

### **Section 3.3 Execution, Authentication, Delivery and Dating.**

The Securities shall be executed on behalf of the Company by its Chairman of the Board, its Vice Chairman of the Board, its Chief Executive Officer, its principal financial officer, its President or one of its Vice Presidents, attested by its Treasurer, its Secretary or one of its Assistant Treasurers or Assistant Secretaries. The signature of any of these officers on the Securities may be manual or facsimile.

Securities bearing the manual or facsimile signatures of individuals who were at any time the proper officers of the Company shall bind the Company, notwithstanding that such individuals or any of them have ceased to hold such offices prior to the authentication and delivery of such Securities or did not hold such offices at the date of such Securities.

At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Securities of any series executed by the Company to the Trustee for authentication, together with a Company Order for the authentication and delivery of such Securities, and the Trustee in accordance with the Company Order shall authenticate and deliver such Securities. If the form or terms of the Securities of the series have been established by or pursuant to one or more Board Resolutions as permitted by Sections 2.1 and 3.1, 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 6.1) shall be fully protected in relying upon, a copy of such Board Resolution, the Officers' Certificate setting forth the terms of the series and an Opinion of Counsel, with such Opinion of Counsel stating,

- (1) if the form of such Securities has been established by or pursuant to Board Resolution as permitted by Section 2.1, that such form has been established in conformity with the provisions of this Indenture;
- (2) if the terms of such Securities have been established by or pursuant to Board Resolution as permitted by Section 3.1, that such terms have been established in conformity with the provisions of this Indenture; and
- (3) that such Securities, when authenticated and delivered by the Trustee and issued by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will constitute valid and legally binding obligations of the Company enforceable in accordance with their terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and to general equity principles.

If such form or terms have been so established, the Trustee shall not be required to authenticate such Securities if the issue of such Securities pursuant to this Indenture will affect the Trustee's own rights, duties or immunities under the Securities and this Indenture or otherwise in a manner which is not reasonably acceptable to the Trustee.

Notwithstanding the provisions of Section 3.1 and of the preceding paragraph, if all Securities of a series are not to be originally issued at one time, it shall not be necessary to deliver the Officers' Certificate otherwise required pursuant to Section 3.1 or the Company Order and Opinion of Counsel otherwise required pursuant to such preceding paragraph at or prior to the authentication of each Security of such series if such documents are delivered at or prior to the authentication upon original issuance of the first Security of such series to be issued.

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Each Security shall be dated the date of its authentication.

No Security shall be entitled to any benefit under this Indenture or be valid or obligatory for any purpose unless there appears on such Security a certificate of authentication substantially in the form provided for herein executed by the Trustee by manual signature, and such certificate upon any Security shall be conclusive evidence, and the only evidence, that such Security has been duly authenticated and delivered hereunder. Notwithstanding the foregoing, if any Security shall have been authenticated and delivered hereunder but never issued and sold by the Company, and the Company shall deliver such Security to the Trustee for cancellation as provided in Section 3.9, for all purposes of this Indenture such Security shall be deemed never to have been authenticated and delivered hereunder and shall never be entitled to the benefits of this Indenture.

Neither the Company nor the Trustee shall have any responsibility for any defect in the CUSIP number that appears on any Security, check, advice of payment or redemption notice, and any such document may contain a statement to the effect that CUSIP numbers have been assigned by an independent service for convenience of reference and that neither the Company nor the Trustee shall be liable for any inaccuracy in such numbers.

### **Section 3.4 Temporary Securities.**

Pending the preparation of definitive Securities of any series, the Company may execute, and upon Company Order the Trustee shall authenticate and deliver, temporary Securities which are printed, lithographed, typewritten, mimeographed or otherwise produced, in any authorized denomination, substantially of the tenor of the definitive Securities in lieu of which they are issued and with such appropriate insertions, omissions, substitutions and other variations as the officers executing such Securities may determine, as evidenced by their execution of such Securities.

If temporary Securities of any series are issued, the Company will cause definitive Securities of that series to be prepared without unreasonable delay. After the preparation of definitive Securities of such series, the temporary Securities of such series shall be exchangeable for definitive Securities of such series upon surrender of the temporary Securities of such series at the office or agency of the Company in a Place of Payment for that series, without charge to the Holder. Upon surrender for cancellation of any one or more temporary Securities of any series, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor one or more definitive Securities of the same series, of any authorized denominations and of like tenor and aggregate principal amount. Until so exchanged, the temporary Securities of any series shall in all respects be entitled to the same benefits under this Indenture as definitive Securities of such series and tenor.

### **Section 3.5 Registration; Registration of Transfer and Exchange.**

The Company shall cause to be kept at the Corporate Trust Office of the Trustee a register (the register maintained in such office and in any other office or agency of the Company in a Place of Payment being herein sometimes collectively referred to as the "Security Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall provide for the registration of Securities and of transfers of Securities. The Trustee is hereby appointed "Security Registrar" for the purpose of registering Securities and transfers of Securities as herein provided.

Upon surrender for registration of transfer of any Security of a series at the office or agency of the Company in a Place of Payment for that series, the Company shall execute, and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more new Securities of the same series, of any authorized denominations and of like tenor and aggregate principal amount.

At the option of the Holder, Securities of any series may be exchanged for other Securities of the same series, of any authorized denominations and of like tenor and aggregate principal amount, upon surrender of the Securities to be exchanged at such office or agency. Whenever any Securities are so surrendered for exchange, the Company shall execute, and the Trustee shall authenticate and deliver, the Securities that the Holder making the exchange is entitled to receive. All Securities issued upon any registration of transfer or exchange of Securities shall be the valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Securities surrendered upon such registration of transfer or exchange.

Every Security presented or surrendered for registration of transfer or for exchange shall (if so required by the Company or the Trustee) be duly endorsed, or be accompanied by a written instrument of transfer in form satisfactory to the Company and the Security Registrar duly executed, by the Holder thereof or its attorney duly authorized in writing. No

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service charge shall be made for any registration of transfer or exchange of Securities, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in connection with any registration of transfer or exchange of Securities, other than exchanges pursuant to Section 3.4, 9.6 or 11.7 not involving any transfer.

If the Securities of any series (or of any series and specified tenor) are to be redeemed in part, the Company shall not be required (A) to issue, register the transfer of or exchange any Securities of that series (or of that series and specified tenor, as the case may be) during a period beginning at the opening of business 15 days before the day of the mailing of a notice of redemption of any such Securities selected for redemption under Section 11.3 and ending at the close of business on the day of such mailing, or (B) to register the transfer of or exchange any Security so selected for redemption in whole or in part, except the unredeemed portion of any Security being redeemed in part.

The provisions of clauses (1), (2), (3) and (4) below shall apply only to Global Securities:

(1) Each Global Security authenticated under this Indenture shall be registered in the name of the Depositary designated for such Global Security or a nominee thereof and delivered to such Depositary or a nominee thereof or custodian therefor, and each such Global Security shall constitute a single Security for all purposes of this Indenture.

(2) Notwithstanding any other provision in this Indenture, no Global Security may be exchanged in whole or in part for Securities registered, and no transfer of a Global Security in whole or in part may be registered, in the name of any Person other than the Depositary for such Global Security or a nominee thereof unless (A) such Depositary (i) has notified the Company that it is unwilling or unable to continue as Depositary for such Global Security or (ii) has ceased to be a clearing agency registered under the Exchange Act, (B) there shall have occurred and be continuing an Event of Default with respect to such Global Security or (C) there shall exist such circumstances, if any, in addition to or in lieu of the foregoing as have been specified for this purpose as contemplated by Section 3.1.

(3) Subject to clause (2) above, any exchange of a Global Security for other Securities may be made in whole or in part, and all Securities issued in exchange for a Global Security or any portion thereof shall be registered in such names as the Depositary for such Global Security shall direct.

(4) Every Security authenticated and delivered upon registration of transfer of, or in exchange for or in lieu of, a Global Security or any portion thereof, whether pursuant to this Section, Section 3.4, 3.6, 9.6 or 11.7 or otherwise, shall be authenticated and delivered in the form of, and shall be, a Global Security, unless such Security is registered in the name of a Person other than the Depositary for such Global Security or a nominee thereof.

### **Section 3.6 Mutilated, Destroyed, Lost and Stolen Securities.**

If any mutilated Security is surrendered to the Trustee, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a new Security of the same series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

If there shall be delivered to the Company and the Trustee (i) evidence to their satisfaction of the destruction, loss or theft of any Security and (ii) such security or indemnity as may be required by them to save each of them and any agent of either of them harmless, then, in the absence of notice to the Company or the Trustee that such Security has been acquired by a bona fide purchaser, the Company shall execute and the Trustee shall authenticate and deliver, in lieu of any such destroyed, lost or stolen Security, a new Security of the same series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

In case any such mutilated, destroyed, lost or stolen Security has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Security, pay such Security.

Upon the issuance of any new Security under this Section, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith.

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Every new Security of any series issued pursuant to this Section in lieu of any destroyed, lost or stolen Security shall constitute an original additional contractual obligation of the Company, whether or not the destroyed, lost or stolen Security shall be at any time enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of that series duly issued hereunder.

The provisions of this Section are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities.

### **Section 3.7 Payment of Interest; Interest Rights Preserved.**

Except as otherwise provided as contemplated by Section 3.1 with respect to any series of Securities, interest on any Security which is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the Person in whose name that Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest.

Any interest on any Security of any series which is payable, but is not punctually paid or duly provided for, on any Interest Payment Date (herein called "Defaulted Interest") shall forthwith cease to be payable to the Holder on the relevant Regular Record Date by virtue of having been such Holder, and such Defaulted Interest may be paid by the Company, at its election in each case, as provided in clause (1) or (2) below:

(1) The Company may elect to make payment of any Defaulted Interest to the Persons in whose names the Securities of such series (or their respective Predecessor Securities) are registered at the close of business on a Special Record Date for the payment of such Defaulted Interest, which shall be fixed in the following manner. The Company shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each Security of such series and the date of the proposed payment, and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as in this clause provided. Thereupon the Trustee shall fix a Special Record Date for the payment of such Defaulted Interest, which shall be not more than 15 days and not less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such Special Record Date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be given to each Holder of Securities of such series in the manner set forth in Section 1.6, not less than 10 days prior to such Special Record Date. Notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor having been so mailed, such Defaulted Interest shall be paid to the Persons in whose names the Securities of such series (or their respective Predecessor Securities) are registered at the close of business on such Special Record Date and shall no longer be payable pursuant to the following clause (2).

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

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

Subject to the provisions of Section 14.2, in the case of any Security (or any part thereof) which is converted after any Regular Record Date and on or prior to the next succeeding Interest Payment Date (other than any Security the principal of (or premium, if any, on) which shall become due and payable, whether at Stated Maturity or by declaration of acceleration or otherwise prior to such Interest Payment Date), interest whose Stated Maturity is on such Interest Payment Date shall be payable on such Interest Payment Date notwithstanding such conversion and such interest (whether or not punctually paid or duly provided for) shall be paid to the Person in whose name that Security (or any one or more Predecessor Securities) is registered at the close of business on such Regular Record Date. Except as otherwise expressly provided in the immediately

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preceding sentence or in Section 14.2, in the case of any Security (or any part thereof) which is converted, interest whose Stated Maturity is after the date of conversion of such Security (or such part thereof) shall not be payable.

### **Section 3.8 Persons Deemed Owners.**

Prior to due presentment of a Security for registration of transfer, the Company, the Trustee and any agent of the Company or the Trustee may treat the Person in whose name such Security is registered as the owner of such Security for the purpose of receiving payment of principal of and any premium and (subject to Section 3.7) any interest on such Security and for all other purposes whatsoever, whether or not such Security be overdue, and neither the Company, the Trustee nor any agent of the Company or the Trustee shall be affected by notice to the contrary.

### **Section 3.9 Cancellation.**

All Securities surrendered for payment, redemption, registration of transfer or exchange or for credit against any sinking fund payment shall, if surrendered to any Person other than the Trustee, be delivered to the Trustee and shall be promptly canceled by it. The Company may at any time deliver to the Trustee for cancellation any Securities previously authenticated and delivered hereunder which the Company may have acquired in any manner whatsoever, and may deliver to the Trustee (or to any other Person for delivery to the Trustee) for cancellation any Securities previously authenticated hereunder which the Company has not issued and sold, and all Securities so delivered shall be promptly canceled by the Trustee. No Securities shall be authenticated in lieu of or in exchange for any Securities canceled as provided in this Section, except as expressly permitted by this Indenture. All canceled Securities held by the Trustee shall be disposed of in accordance with its customary procedures.

### **Section 3.10 Computation of Interest.**

Except as otherwise specified as contemplated by Section 3.1 for Securities of any series, interest on the Securities of each series shall be computed on the basis of a 360-day year of twelve 30-day months.

## **ARTICLE 4**

### **SATISFACTION AND DISCHARGE**

#### **Section 4.1 Satisfaction and Discharge of Indenture.**

This Indenture shall upon Company Request cease to be of further effect (except as to any surviving rights of registration of transfer or exchange of Securities herein expressly provided for), and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging satisfaction and discharge of this Indenture, when

(1) either

(A) all Securities theretofore authenticated and delivered (other than (i) Securities which have been destroyed, lost or stolen and which have been replaced or paid as provided in Section 3.6 and (ii) Securities for whose payment money has theretofore been deposited in trust or segregated and held in trust by the Trustee or the Company and thereafter repaid to the Company or discharged from such trust, as provided in Section 10.3) have been delivered to the Trustee for cancellation; or

(B) all such Securities not theretofore delivered to the Trustee for cancellation

(i) have become due and payable, or

(ii) will become due and payable at their Stated Maturity within one year, or

(iii) are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee in the name, and at the expense, of the Company,

and the Company, in the case of (i), (ii) or (iii) above, has deposited or caused to be deposited with the

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Trustee as trust funds in trust for the purpose money in an amount sufficient to pay and discharge the entire indebtedness on such Securities not theretofore delivered to the Trustee for cancellation, for principal and any premium and interest to the date of such deposit (in the case of Securities which have become due and payable) or to the Stated Maturity or Redemption Date, as the case may be;

(2) the Company has paid or caused to be paid all other sums payable hereunder by the Company;  
and

(3) the Company has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent herein provided for relating to the satisfaction and discharge of this Indenture have been complied with.

Notwithstanding the satisfaction and discharge of this Indenture, the obligations of the Company to the Trustee under Section 6.7, the obligations of the Trustee to any Authenticating Agent under Section 6.14 and, if money shall have been deposited with the Trustee pursuant to subclause (B) of clause (1) of this Section, the obligations of the Trustee under Section 4.2 and the last paragraph of Section 10.3 shall survive.

#### **Section 4.2 Application of Trust Money.**

Subject to the provisions of the last paragraph of Section 10.3, all money deposited with the Trustee pursuant to Section 4.1 shall be held in trust and applied by it, in accordance with the provisions of the Securities and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the Persons entitled thereto, of the principal and any premium and interest for whose payment such money has been deposited with the Trustee.

### **ARTICLE 5**

#### **REMEDIES**

##### **Section 5.1 Events of Default.**

"Event of Default," wherever used herein with respect to Securities of any series, means any one of the following events (whatever the reason for such Event of Default and whether it shall be occasioned by the provisions of Article 15 or 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), unless in the Board Resolution, supplemental indenture or Officers' Certificate establishing such series, it is provided that such series shall not have the benefit of said Event of Default:

(1) default in the payment of any interest upon any Security of that series when it becomes due and payable, and continuance of such default for a period of 60 days; or

(2) default in the payment of the principal of or any premium on any Security of that series at its Maturity; or

(3) default in the deposit of any sinking fund payment, when and as due by the terms of a Security of that series; or

(4) default in the performance, or breach, of any covenant or warranty of the Company in this Indenture (other than a covenant or warranty a default in whose performance or whose breach is elsewhere in this Section specifically dealt with or which has expressly been included in this Indenture solely for the benefit of series of Securities other than that series), 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 Company by the Trustee or to the Company and the Trustee by the Holders of at least 25% in principal amount of the Outstanding Securities of that series a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a "Notice of Default" hereunder; or

(5) the entry by a court having jurisdiction in the premises of (A) a decree or order for relief in respect

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of the Company in an involuntary case or proceeding under any applicable Federal or State bankruptcy, insolvency, reorganization or other similar law or (B) a decree or order adjudging the Company a bankrupt or insolvent, or approving as properly filed a petition seeking reorganization, arrangement, adjustment or composition of or in respect of the Company under any applicable Federal or State law, or appointing a custodian, receiver, liquidator, assignee, trustee, sequestrator or other similar official of the Company or of any substantial part of its property, or ordering the winding up or liquidation of its affairs, and the continuance of any such decree or order for relief or any such other decree or order unstayed and in effect for a period of 90 consecutive days; or

(6) the commencement by the Company of a voluntary case or proceeding under any applicable Federal or State bankruptcy, insolvency, reorganization or other similar law or of any other case or proceeding to be adjudicated a bankrupt or insolvent, or the consent by it to the entry of a decree or order for relief in respect of the Company in an involuntary case or proceeding under any applicable Federal or State bankruptcy, insolvency, reorganization or other similar law or to the commencement of any bankruptcy or insolvency case or proceeding against it, or the filing by it of a petition or answer or consent seeking reorganization or relief under any applicable Federal or State law, or the consent by it to the filing of such petition or to the appointment of or taking possession by a custodian, receiver, liquidator, assignee, trustee, sequestrator or other similar official of the Company or of any substantial part of its property, or the making by it of an assignment for the benefit of creditors, or the admission by it in writing of its inability to pay its debts generally as they become due, or the taking of corporate action by the Company in furtherance of any such action; or

(7) any other Event of Default provided with respect to Securities of that series in the Board Resolution, supplemental indenture or Officers' Certificate establishing that series.

## **Section 5.2 Acceleration of Maturity; Rescission and Annulment.**

(a) Unless the Board Resolution, supplemental indenture or Officers' Certificate establishing such series provides otherwise, if an Event of Default (other than an Event of Default specified in Section 5.1(5) or 5.1(6)) with respect to Securities of any series at the time Outstanding occurs and is continuing, then in every such case the Trustee or the Holders of not less than 25% in principal amount of the Outstanding Securities of that series may declare the principal amount of all the Securities of that series (or, if any Securities of that series are Original Issue Discount Securities, such portion of the principal amount of such Securities as may be specified by the terms thereof), and premium, if any, together with accrued and unpaid interest, if any, thereon, to be due and payable immediately, by a notice in writing to the Company (and to the Trustee if given by the Holders), and upon any such declaration such principal amount (or specified amount), and premium, if any, together with accrued and unpaid interest, if any, thereon, shall become immediately due and payable. If an Event of Default specified in Section 5.1(5) or 5.1(6) with respect to Securities of any series at the time Outstanding occurs, the principal amount of all the Securities of that series (or, if any Securities of that series are Original Issue Discount Securities, such portion of the principal amount of such Securities as may be specified by the terms thereof), and premium, if any, together with accrued and unpaid interest, if any, thereon, shall automatically, and without any declaration or other action on the part of the Trustee or any Holder, become immediately due and payable.

(b) Notwithstanding the foregoing, at the election of the Company, the sole remedy with respect to an Event of Default for the failure by the Company to comply with its obligations under Section 314(a)(1) of the Trust Indenture Act relating to the Company's failure to file any documents or reports that the Company is required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act or of its covenants set forth in Section 7.4 (any such Event of Default, a "Reporting Default"), shall for the first 180 calendar days after the occurrence of such Reporting Default consist exclusively of the right to receive additional interest (the "Additional Interest") on the Securities at an annual rate equal to (i) 0.25% of the principal amount of the Securities for the first 90 calendar days after the occurrence of such Reporting Default and (ii) 0.50% of the principal amount of the Securities from the 91st day to, and including, the 180th day after the occurrence of such Reporting Default. If the Company so elects, the Additional Interest shall accrue on all Outstanding Securities from and including the date on which such Reporting Default first occurs until such violation is cured or waived and shall be payable as provided in Section 3.7. On the 181st day after such Reporting Default (if such violation is not cured or waived prior to such 181st calendar day), then the Trustee or the Holders of not less than 25% in principal amount of the Outstanding securities may declare the principal of, and premium, if any, together with accrued and unpaid interest, if any, on all such Securities to be due and payable immediately.

If the Company elects to pay the Additional Interest as the sole remedy for the Reporting Default, the Company

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shall notify in writing, by a certificate, the Holders, the Paying Agent and the Trustee of such election at any time on or before the close of business on the first Business Day following the date on which such Event of Default first occurs. Unless and until a Responsible Officer of the Trustee receives at the Corporate Trust Office such a certificate, the Trustee may assume without inquiry that Additional Interest is not payable. The Company shall pay the Additional Interest semi-annually in arrears, with the first semi-annual payment due on the first Interest Payment Date following the date of such Reporting Default, in the same manner as described on the face of the Security.

(c) At any time after such a declaration of acceleration with respect to Securities of any series has been made and before a judgment or decree for payment of the money due has been obtained by the Trustee as hereinafter in this Article provided, the Holders of a majority in principal amount of the Outstanding Securities of that series, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if

(1) the Company has paid or deposited with the Trustee a sum sufficient to pay

(A) all overdue interest on all Securities of that series,

(B) the principal of (and premium, if any, on) any Securities of that series which have become due otherwise than by such declaration of acceleration and any interest thereon at the rate or rates prescribed therefor in such Securities,

(C) to the extent that payment of such interest is lawful, interest upon overdue interest at the rate or rates prescribed therefor in such Securities, and

(D) all sums paid or advanced by the Trustee hereunder and the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel; and

(2) all Events of Default with respect to Securities of that series, other than the non-payment of the principal of Securities of that series that have become due solely by such declaration of acceleration, have been cured or waived as provided in Section 5.13.

No such rescission shall affect any subsequent default or impair any right consequent thereon.

### **Section 5.3 Collection of Indebtedness and Suits for Enforcement by Trustee.**

The Company covenants that if

(1) default is made in the payment of any interest on any Security when such interest becomes due and payable and such default continues for a period of 30 days, or

(2) default is made in the payment of the principal of (or premium, if any, on) any Security at the Maturity thereof, the Company will, upon demand of the Trustee, pay to it, for the benefit of the Holders of such Securities, the whole amount then due and payable on such Securities for principal and any premium and interest and, to the extent that payment of such interest shall be legally enforceable, interest on any overdue principal and premium and on any overdue interest, at the rate or rates prescribed therefor in such Securities, and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel.

If an Event of Default with respect to Securities of any series occurs and is continuing, the Trustee may in its discretion proceed to protect and enforce its rights and the rights of the Holders of Securities of such series by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any such rights, whether for the specific enforcement of any covenant or agreement in this Indenture or in aid of the exercise of any power granted herein, or to enforce any other proper remedy.

### **Section 5.4 Trustee May File Proofs of Claim.**

In case of any judicial proceeding relative to the Company (or any other obligor upon the Securities), its property or

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its creditors, the Trustee shall be entitled and empowered, by intervention in such proceeding or otherwise, to take any and all actions authorized under the Trust Indenture Act in order to have claims of the Holders and the Trustee allowed in any such proceeding. In particular, the Trustee shall be authorized to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same; and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay to the Trustee any amount due it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 6.7. No provision of this Indenture shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Securities or the rights of any Holder thereof or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding; provided, however, that the Trustee may, on behalf of the Holders, vote for the election of a trustee in bankruptcy or similar official and be a member of a creditors' or other similar committee.

#### **Section 5.5 Trustee May Enforce Claims Without Possession of Securities.**

All rights of action and claims under this Indenture or the Securities may be prosecuted and enforced by the Trustee without the possession of any of the Securities or the production thereof in any proceeding relating thereto, and any such proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for the payment of the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, be for the ratable benefit of the Holders of the Securities in respect of which such judgment has been recovered.

#### **Section 5.6 Application of Money Collected.**

Any money collected by the Trustee pursuant to this Article shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such money on account of principal or any premium or interest, upon presentation of the Securities and the notation thereon of the payment if only partially paid and upon surrender thereof if fully paid:

FIRST: To the payment of all amounts due the Trustee under Section 6.7;

SECOND: To the payment of the amounts then due and unpaid for principal of and any premium, if any, and interest on the Securities in respect of which or for the benefit of which such money has been collected, ratably, without preference or priority of any kind, according to the amounts due and payable on such Securities for principal and any premium, if any, and interest, respectively; and

THIRD: The balance, if any, to the Company or any other Person or Persons entitled thereto.

#### **Section 5.7 Limitation on Suits.**

No Holder of any Security of any series shall have any right to institute any proceeding, judicial or otherwise, with respect to this Indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless

(1) such Holder has previously given written notice to the Trustee of a continuing Event of Default with respect to the Securities of that series;

(2) the Holders of at least 25% in aggregate principal amount of the Outstanding Securities of that series shall have made written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee hereunder;

(3) such Holder or Holders have offered to the Trustee reasonable indemnity against the costs, expenses and liabilities to be incurred in compliance with such request;

(4) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity has failed to institute any such proceeding; and

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(5) no direction inconsistent with such written request has been given to the Trustee during such 60-day period by the Holders of a majority in principal amount of the Outstanding Securities of that series;

it being understood and intended that no one or more of such Holders shall have any right in any manner whatever by virtue of, or by availing of, any provision of this Indenture to affect, disturb or prejudice the rights of any other of such Holders, or to obtain or to seek to obtain priority or preference over any other of such Holders or to enforce any right under this Indenture, except in the manner herein provided and for the equal and ratable benefit of all of such Holders.

#### **Section 5.8 Unconditional Right of Holders to Receive Principal, Premium and Interest and to Convert.**

Notwithstanding any other provision in this Indenture, the Holder of any Security shall have the right, which is absolute and unconditional, to receive payment of the principal of and any premium and (subject to Section 3.7) interest on such Security on the respective Stated Maturities expressed in such Security (or, in the case of redemption, on the Redemption Date), to convert such Securities in accordance with Article 14 to the extent that such right to convert is applicable to such Security, and to institute suit for the enforcement of any such payment, and such rights shall not be impaired without the consent of such Holder.

#### **Section 5.9 Restoration of Rights and Remedies.**

If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Company, the Trustee and the Holders shall be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Trustee and the Holders shall continue as though no such proceeding had been instituted.

#### **Section 5.10 Rights and Remedies Cumulative.**

Except as otherwise provided with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities in the last paragraph of Section 3.6, no right or remedy herein conferred upon or reserved to the Trustee or to the Holders is intended to be exclusive of any other right or remedy, and every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

#### **Section 5.11 Delay or Omission Not Waiver.**

No delay or omission of the Trustee or of any Holder of any Securities to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of any such Event of Default or an acquiescence therein. Every right and remedy given by this Article or by law to the Trustee or to the Holders may be exercised from time to time, and as often as may be deemed expedient, by the Trustee (subject to the limitations contained in this Indenture) or by the Holders, as the case may be.

#### **Section 5.12 Control by Holders.**

The Holders of a majority in principal amount of the Outstanding Securities of any series shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee, with respect to the Securities of such series, provided that

(1) such direction shall not be in conflict with any rule of law or with this Indenture and the Trustee shall not have determined that the action so directed would be unjustly prejudicial to Holders of Securities of that series, or any other series, not taking part in such direction; and

(2) the Trustee may take any other action deemed proper by the Trustee that is not inconsistent with such direction or this Indenture.

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### **Section 5.13 Waiver of Past Defaults.**

The Holders of not less than a majority in principal amount of the Outstanding Securities of any series may on behalf of the Holders of all the Securities of such series waive any past default hereunder with respect to such series and its consequences, except

(1) a default in the payment of the principal of or any premium or interest on any Security of such series as and when the same shall become due and payable by the terms thereof, otherwise than by acceleration (unless such default has been cured and a sum sufficient to pay all matured installments of interest, principal and premium, if any, has been deposited with the Trustee), or

(2) to the extent such right is applicable to such Security, a failure by the Company on request to convert any Security into Common Stock; or

(3) in respect of a covenant or provision hereof which under Article 9 cannot be modified or amended without the consent of the Holder of each Outstanding Security of such series affected.

Upon any such waiver, such default shall cease to exist, and any Event of Default arising therefrom shall be deemed to have been cured, for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

### **Section 5.14 Undertaking for Costs.**

In any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken, suffered or omitted by it as Trustee, a court may require any party litigant in such suit to file an undertaking to pay the costs of such suit, and may assess costs against any such party litigant, in the manner and to the extent provided in the Trust Indenture Act; provided that neither this Section nor the Trust Indenture Act shall be deemed to authorize any court to require such an undertaking or to make such an assessment in any suit instituted by the Company or in any suit for the enforcement of the right to convert any Security in accordance with Article 14.

### **Section 5.15 Waiver of Usury, Stay or Extension Laws.**

The Company covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, or plead, or in any manner whatsoever claim or take the benefit or advantage of, any usury, stay or extension law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of this Indenture; and the Company (to the extent that it may lawfully do so) hereby expressly waives all benefit or advantage of any such law and covenants that it will not hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law had been enacted.

## **ARTICLE 6**

### **THE TRUSTEE**

#### **Section 6.1 Certain Duties and Responsibilities.**

The duties and responsibilities of the Trustee shall be as provided by the Trust Indenture Act. Notwithstanding the foregoing, no provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder, or in the exercise of any of its rights or powers if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it. Whether or not therein expressly so provided, every provision of this Indenture relating to the conduct or affecting the liability of or affording protection to the Trustee shall be subject to the provisions of this Section.

#### **Section 6.2 Notice of Defaults.**

If a default occurs hereunder with respect to Securities of any series, the Trustee shall give the Holders of Securities of such series notice of such default as and to the extent provided by the Trust Indenture Act; provided, however, that except

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in the case of a default in the payment of principal of (or premium, if any) or interest on any Securities of such series or in the payment of any sinking fund installment or any conversion right applicable to Securities of such series, the Trustee shall be protected in withholding such notice if and so long as a trust committee of directors and/or Responsible Officers of the Trustee in good faith determine that the withholding of such notice is in the interests of the holders of Securities of such series; provided, further, however, that in the case of any default of the character specified in Section 5.1(4) with respect to Securities of such series, no such notice to Holders shall be given until at least 60 days after the occurrence thereof. For the purpose of this Section, the term “default” means any event that is, or after notice or lapse of time or both would become, an Event of Default with respect to Securities of such series.

Except with respect to Section 10.1, the Trustee shall have no duty to inquire as to the performance of the Company with respect to the covenants contained in Article 10. In addition, the Trustee shall not be deemed to have knowledge of an Event of Default except (i) any Default or Event of Default occurring pursuant to Sections 5.1(1), 5.1(2) and 5.1(3) (defaults in payments on the Securities) or (ii) any Default or Event of Default of which the Trustee shall have received written notification or obtained actual knowledge.

Delivery of reports, information and documents to the Trustee under Section 7.4 is for informational purposes only and the Trustee’s receipt of the foregoing shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Company’s compliance with any of their covenants hereunder (as to which the Trustee is entitled to rely conclusively on Officers’ Certificates).

### **Section 6.3 Certain Rights of Trustee.**

Subject to the provisions of Section 6.1:

(1) in the absence of bad faith on the part of the Trustee, the Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(2) any request or direction of the Company mentioned herein shall be sufficiently evidenced by a Company Request or Company Order, and any resolution of the Board of Directors shall be sufficiently evidenced by a Board Resolution;

(3) whenever in the administration of this Indenture the Trustee shall deem it desirable that a matter be proved or established prior to taking, suffering or omitting any action hereunder, the Trustee (unless other evidence be herein specifically prescribed) is entitled to and may, in the absence of bad faith on its part, rely upon an Officers’ Certificate;

(4) the Trustee may consult with counsel and the written advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon;

(5) the Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any of the Holders pursuant to this Indenture, unless such Holders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction;

(6) 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, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall be entitled to examine the books, records and premises of the Company, personally or by agent or attorney; and

(7) the Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or

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negligence on the part of any agent or attorney appointed with due care by it hereunder.

#### **Section 6.4 Not Responsible for Recitals or Issuance of Securities.**

The recitals contained herein and in the Securities, except the Trustee's certificates of authentication, shall be taken as the statements of the Company, and neither the Trustee nor any Authenticating Agent assumes any responsibility for their correctness. The Trustee makes no representations as to the validity, sufficiency or priority of this Indenture or of the Securities. Neither the Trustee nor any Authenticating Agent shall be accountable for the use or application by the Company of Securities or the proceeds thereof.

#### **Section 6.5 May Hold Securities and Act as Trustee under Other Indentures.**

The Trustee, any Authenticating Agent, any Paying Agent, any Security Registrar or any other agent of the Company, in its individual or any other capacity, may become the owner or pledgee of Securities and, subject to Sections 6.8 and 6.13, may otherwise deal with the Company with the same rights it would have if it were not Trustee, Authenticating Agent, Paying Agent, Security Registrar or such other agent. Subject to the limitations imposed by the Trust Indenture Act, nothing in this Indenture shall prohibit the Trustee from becoming and acting as trustee under other indentures under which other securities, or certificates of interest of participation in other securities, of the Company are outstanding in the same manner as if it were not Trustee hereunder.

#### **Section 6.6 Money Held in Trust.**

Money held by the Trustee in trust hereunder need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for interest on any money received by it hereunder except as otherwise agreed with the Company.

#### **Section 6.7 Compensation and Reimbursement.**

The Company agrees:

(1) to pay to the Trustee from time to time reasonable compensation for all services rendered by it hereunder (which compensation shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust);

(2) except as otherwise expressly provided herein, to reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by the Trustee in accordance with any provision of this Indenture (including the reasonable compensation and the expenses and disbursements of its agents and counsel), except any such expense, disbursement or advance as may be attributable to its negligence or bad faith; and

(3) to indemnify the 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 the trust or trusts hereunder, including the costs and expenses of defending itself against any claim or liability in connection with the exercise or performance of any of its powers or duties hereunder.

When the Trustee incurs expenses or renders services after an Event of Default specified in Section 5.1(5) or Section 5.1(6) hereof occurs, the expenses and the compensation for the services (including the fees and expenses of its agents and counsel) are intended to constitute expenses of administration under any applicable bankruptcy, insolvency, reorganization or similar law.

#### **Section 6.8 Conflicting Interests.**

If the Trustee has or shall acquire a conflicting interest within the meaning of the Trust Indenture Act and there is an Event of Default under the Securities of that series, the Trustee shall either eliminate such interest or resign, to the extent and in the manner provided by, and subject to the provisions of, the Trust Indenture Act and this Indenture. To the extent permitted by the Trust Indenture Act, the Trustee shall not be deemed to have a conflicting interest by virtue of being a

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trustee under this Indenture with respect to Securities of more than one series.

#### **Section 6.9 Corporate Trustee Required; Eligibility.**

There shall at all times be one (and only one) Trustee hereunder with respect to the Securities of each series, which may be Trustee hereunder for Securities of one or more other series. Each Trustee shall be a Person that is eligible pursuant to the Trust Indenture Act to act as such and has (or if the Trustee is a member of a bank holding company system, its bank holding company has) a combined capital and surplus of at least \$50,000,000. If any such Person or bank holding company publishes reports of condition at least annually, pursuant to law or to the requirements of its supervising or examining authority, then for the purposes of this Section and to the extent permitted by the Trust Indenture Act, the combined capital and surplus of such Person or bank holding company shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time the Trustee with respect to the Securities of any series shall cease to be eligible in accordance with the provisions of this Section, it shall resign immediately in the manner and with the effect hereinafter specified in this Article.

#### **Section 6.10 Resignation and Removal; Appointment of Successor.**

No resignation or removal of the Trustee and no appointment of a successor Trustee pursuant to this Article shall become effective until the acceptance of appointment by the successor Trustee in accordance with the applicable requirements of Section 6.11. The Trustee may resign at any time with respect to the Securities of one or more series by giving written notice thereof to the Company. If the instrument of acceptance by a successor Trustee required by Section 6.11 shall not have been delivered to the Trustee within 30 days after the giving of such notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor Trustee with respect to the Securities of such series.

The Trustee may be removed at any time with respect to the Securities of any series by Act of the Holders of a majority in principal amount of the Outstanding Securities of such series, delivered to the Trustee and to the Company.

If at any time:

- (1) the Trustee shall fail to comply with Section 6.8 after written request therefor by the Company or by any Holder who has been a bona fide Holder of a Security for at least six months, or
- (2) the Trustee shall cease to be eligible under Section 6.9 and shall fail to resign after written request therefor by the Company or by any such Holder, or
- (3) the Trustee shall become incapable of acting or shall be adjudged a bankrupt or insolvent or a receiver 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 Company by a Board Resolution may remove the Trustee with respect to all Securities, or (B) subject to Section 5.14, any Holder who has been a bona fide Holder of a Security for at least six months may, on behalf of such Holder and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee with respect to all Securities and the appointment of a successor Trustee or Trustees.

If the Trustee shall resign, be removed or become incapable of acting, or if a vacancy shall occur in the office of Trustee for any cause, with respect to the Securities of one or more series, the Company, by a Board Resolution, shall promptly appoint a successor Trustee or Trustees with respect to the Securities of that or those series (it being understood that any such successor Trustee may be appointed with respect to the Securities of one or more or all of such series and that at any time there shall be only one Trustee with respect to the Securities of any particular series) and shall comply with the applicable requirements of Section 6.11. If, within one year after such resignation, removal or incapability, or the occurrence of such vacancy, a successor Trustee with respect to the Securities of any series shall be appointed by Act of the Holders of a majority in principal amount of the Outstanding Securities of such series delivered to the Company and the retiring Trustee, the successor Trustee so appointed shall, forthwith upon its acceptance of such appointment in accordance with the applicable requirements of Section 6.11, become the successor Trustee with respect to the Securities of such series and to that extent supersede the successor Trustee appointed by the Company. If no successor Trustee with respect to the Securities of any

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series shall have been so appointed by the Company or the Holders and accepted appointment in the manner required by Section 6.11, the retiring Trustee may petition, or any Holder who has been a bona fide Holder of a Security of such series for at least six months may petition, on behalf of such Holder and all others similarly situated, any court of competent jurisdiction for the appointment of a successor Trustee with respect to the Securities of such series.

The Company shall give notice of each resignation and each removal of the Trustee with respect to the Securities of any series and each appointment of a successor Trustee with respect to the Securities of any series to all Holders of Securities of such series in the manner provided in Section 1.6. Each notice shall include the name of the successor Trustee with respect to the Securities of such series and the address of its Corporate Trust Office.

#### **Section 6.11 Acceptance of Appointment by Successor.**

In case of the appointment hereunder of a successor Trustee with respect to all Securities, every such successor Trustee so appointed shall execute, acknowledge and deliver to the Company and to the retiring Trustee an instrument accepting such appointment, and thereupon the resignation or removal of the retiring Trustee shall become effective and such successor Trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee; but, on the request of the Company or the successor Trustee, such retiring Trustee shall, upon payment of its charges, execute and deliver an instrument transferring to such successor Trustee all the rights, powers and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor Trustee all property and money held by such retiring Trustee hereunder.

In case of the appointment hereunder of a successor Trustee with respect to the Securities of one or more (but not all) series, the Company, the retiring Trustee and each successor Trustee with respect to the Securities of one or more series shall execute and deliver an indenture supplemental hereto wherein each successor Trustee shall accept such appointment and which (1) shall contain such provisions as shall be necessary or desirable to transfer and confirm to, and to vest in, each successor Trustee all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor Trustee relates, (2) if the retiring Trustee is not retiring with respect to all Securities, shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series as to which the retiring Trustee is not retiring shall continue to be vested in the retiring Trustee, and (3) shall add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee, it being understood that nothing herein or in such supplemental indenture shall constitute such Trustees co-trustees of the same trust and that each such Trustee shall be trustee of a trust or trusts hereunder separate and apart from any trust or trusts hereunder administered by any other such Trustee; and upon the execution and delivery of such supplemental indenture the resignation or removal of the retiring Trustee shall become effective to the extent provided therein and each such successor Trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor Trustee relates; but, on request of the Company or any successor Trustee, such retiring Trustee shall duly assign, transfer and deliver to such successor Trustee all property and money held by such retiring Trustee hereunder with respect to the Securities of that or those series to which the appointment of such successor Trustee relates.

Upon request of any such successor Trustee, the Company shall execute any and all instruments for more fully and certainly vesting in and confirming to such successor Trustee all such rights, powers and trusts referred to in the first or second preceding paragraph, as the case may be. No successor Trustee shall accept its appointment unless at the time of such acceptance such successor Trustee shall be qualified and eligible under this Article.

#### **Section 6.12 Merger, Conversion, Consolidation or Succession to Business.**

Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to all or substantially all the corporate trust business of the Trustee (including the administration of the trust created by this Indenture), shall be the successor of the Trustee hereunder, provided such corporation shall be otherwise qualified and eligible under this Article, without the execution or filing of any paper or any further act on the part of any of the parties hereto. In case any Securities shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to such authenticating Trustee may adopt such authentication and deliver the Securities so authenticated with the same effect as if such successor Trustee had itself authenticated such Securities. In

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the event that any Securities shall not have been authenticated by such predecessor Trustee, any such successor Trustee may authenticate and deliver such Securities in either its own name or that of a predecessor Trustee, with the full force and effect which this Indenture provides for the certificate of authentication of the Trustee.

#### **Section 6.13 Preferential Collection of Claims Against Company.**

If and when the Trustee shall be or become a creditor of the Company (or any other obligor upon the Securities), the Trustee shall be subject to the provisions of the Trust Indenture Act regarding the collection of claims against the Company (or any such other obligor).

#### **Section 6.14 Appointment of Authenticating Agent.**

The Trustee may appoint an Authenticating Agent or Agents with respect to one or more series of Securities which shall be authorized to act on behalf of the Trustee to authenticate Securities of such series issued upon original issue and upon exchange, registration of transfer or partial redemption thereof or pursuant to Section 3.6, and Securities so authenticated shall be entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. Wherever reference is made in this Indenture to the authentication and delivery of Securities by the Trustee or the Trustee's certificate of authentication, such reference shall be deemed to include authentication and delivery on behalf of the Trustee by an Authenticating Agent and a certificate of authentication executed on behalf of the Trustee by an Authenticating Agent. Each Authenticating Agent shall be acceptable to the Company and shall at all times be a corporation organized and doing business under the laws of the United States of America, any State thereof or the District of Columbia, authorized under such laws to act as Authenticating Agent, having (or if the Authenticating Agent is a member of a bank holding company system, its bank holding company has) a combined capital and surplus of not less than \$50,000,000 and subject to supervision or examination by Federal or State authority. If such Authenticating Agent publishes reports of condition at least annually, pursuant to law or to the requirements of said supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such Authenticating Agent shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time an Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, such Authenticating Agent shall resign immediately in the manner and with the effect specified in this Section.

Any corporation into which an Authenticating Agent may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which such Authenticating Agent shall be a party, or any corporation succeeding to the corporate agency or corporate trust business of an Authenticating Agent, shall continue to be an Authenticating Agent, provided such corporation shall be otherwise eligible under this Section, without the execution or filing of any paper or any further act on the part of the Trustee or the Authenticating Agent.

An Authenticating Agent may resign at any time by giving written notice thereof to the Trustee and to the Company. The Trustee may at any time terminate the agency of an Authenticating Agent by giving written notice thereof to such Authenticating Agent and to the Company. Upon receiving such a notice of resignation or upon such a termination, or in case at any time such Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, the Trustee may appoint a successor Authenticating Agent which shall be acceptable to the Company and shall give notice of such appointment in the manner provided in Section 1.6 to all Holders of Securities of the series with respect to which such Authenticating Agent will serve. Any successor Authenticating Agent upon acceptance of its appointment hereunder shall become vested with all the rights, powers and duties of its predecessor hereunder, with like effect as if originally named as an Authenticating Agent. No successor Authenticating Agent shall be appointed unless eligible under the provisions of this Section.

The Trustee agrees to pay to each Authenticating Agent from time to time reasonable compensation for its services under this Section, and the Trustee shall be entitled to be reimbursed for such payments, subject to the provisions of Section 6.7.

If an appointment with respect to one or more series is made pursuant to this Section 6.14, the Securities of such series may have endorsed thereon, in lieu of the Trustee's certificate of authentication, an alternative certificate of authentication in the following form:

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

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By: \_\_\_\_\_  
As Authenticating Agent

By: \_\_\_\_\_  
As Authenticating Officer

## ARTICLE 7

### **HOLDERS' LISTS AND REPORTS BY TRUSTEE AND COMPANY**

#### **Section 7.1 Company to Furnish Trustee Names and Addresses of Holders.**

The Company will furnish or cause to be furnished to the Trustee

(1) semi-annually, not later than 15 days after the Regular Record Date for each respective series of Securities, a list, in such form as the Trustee may reasonably require, of the names and addresses of the Holders of Securities of each series as of such Regular Record Date, as the case may be, or if there is no Regular Record Date for such series of Securities, semi-annually, and

(2) at such other times as the Trustee may request in writing, within 30 days after the receipt by the Company of any such request, a list of similar form and content as of a date not more than 15 days prior to the time such list is furnished;

provided that no such lists need be furnished by the Company to the Trustee so long as the Trustee is acting as Security Registrar.

#### **Section 7.2 Preservation of Information; Communications to Holders.**

The Trustee shall preserve, in as current a form as is reasonably practicable, the names and addresses of Holders contained in the most recent list furnished to the Trustee as provided in Section 7.1 and the names and addresses of Holders received by the Trustee in its capacity as Security Registrar. The Trustee may destroy any list furnished to it as provided in Section 7.1 upon receipt of a new list so furnished.

The rights of Holders to communicate with other Holders with respect to their rights under this Indenture or under the Securities, and the corresponding rights and privileges of the Trustee, shall be as provided by the Trust Indenture Act. Every Holder of Securities, by receiving and holding the same, agrees with the Company and the Trustee that neither the Company nor the Trustee nor any agent of either of them shall be held accountable by reason of any disclosure of information as to names and addresses of Holders made pursuant to the Trust Indenture Act.

#### **Section 7.3 Reports by Trustee.**

The Trustee shall transmit to Holders such reports concerning the Trustee and its actions under this Indenture as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant thereto.

Reports so required to be transmitted at stated intervals of not more than 12 months shall be transmitted no later than July 15 in each calendar year, commencing with the first July 15 after the first issuance of Securities pursuant to this Indenture.

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

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#### **Section 7.4 Reports by Company.**

Any information, documents or other reports that the Company shall file with the Commission pursuant to Section 13 or 15(d) of the Exchange Act shall be filed with the Trustee within 15 days after the same is filed with the Commission; provided that any such information, documents or reports filed or furnished with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval (or EDGAR) system shall be deemed to be filed with the Trustee as of the time such information, documents or reports are filed or furnished via EDGAR.

### **ARTICLE 8**

#### **CONSOLIDATION, MERGER, CONVEYANCE, TRANSFER OR LEASE**

##### **Section 8.1 Company May Consolidate, etc., Only on Certain Terms.**

The Company shall not consolidate with or merge into any other Person (other than a Subsidiary of the Company) (in a transaction in which the Company is not the surviving corporation) or convey, transfer or lease its properties and assets substantially as an entirety to any Person (other than a Subsidiary of the Company), unless:

(1) in case the Company shall consolidate with or merge into another Person (in a transaction in which the Company is not the surviving corporation) or convey, transfer or lease its properties and assets substantially as an entirety to any Person, the Person formed by such consolidation or into which the Company is merged or the Person which acquires by conveyance or transfer, or which leases, the properties and assets of the Company substantially as an entirety shall be a corporation, limited liability company partnership, trust or other business entity, shall be organized and validly existing under the laws of the United States of America, any State thereof or the District of Columbia and 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 of and any premium and interest on all the Securities and the performance or observance of every covenant of this Indenture on the part of the Company to be performed or observed and the conversion rights shall be provided for in accordance with Article 14, if applicable, or as otherwise specified pursuant to Section 3.1, by supplemental indenture satisfactory in form to the Trustee, executed and delivered to the Trustee, by the Person (if other than the Company) formed by such consolidation or into which the Company shall have been merged or by the Person which shall have acquired the Company's assets;

(2) immediately after giving effect to such transaction and treating any indebtedness which becomes an obligation of the Company or any Subsidiary as a result of such transaction as having been incurred by the Company or such Subsidiary at the time of 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 occurred and be continuing; and

(3) the Company has delivered to the Trustee an Officers' 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.

##### **Section 8.2 Successor Substituted.**

Upon any consolidation of the Company with, or merger of the Company into, any other Person or any conveyance, transfer or lease of the properties and assets of the Company substantially as an entirety in accordance with Section 8.1, the successor Person formed by such consolidation or into which the Company 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 Company under this Indenture with the same effect as if such successor Person had been named as the Company 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.

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## ARTICLE 9

### SUPPLEMENTAL INDENTURES

#### Section 9.1 Supplemental Indentures Without Consent of Holders.

Without the consent of any Holders, the Company, when authorized by a Board Resolution, and the Trustee, at any time and from time to time, may enter into one or more indentures supplemental hereto, in form satisfactory to the Trustee, for any of the following purposes:

- (1) to evidence the succession of another Person to the Company, or successive successions, and the assumption by any such successor of the covenants of the Company herein and in the Securities in compliance with Article 8; or
  - (2) to add to the covenants of the Company for the benefit of the Holders of all or any series of Securities (and if such covenants are to be for the benefit of less than all series of Securities, stating that such covenants are expressly being included solely for the benefit of such series) or to surrender any right or power herein conferred upon the Company; or
  - (3) to add any additional Events of Default for the benefit of the Holders of all or any series of Securities (and if such additional Events of Default are to be for the benefit of less than all series of Securities, stating that such additional Events of Default are expressly being included solely for the benefit of such series); or
  - (4) to add to or change any of the provisions of this Indenture to such extent as shall be necessary to permit or facilitate the issuance of Securities in bearer form, registrable or not registrable as to principal, and with or without interest coupons, or to permit or facilitate the issuance of Securities in uncertificated form; or
  - (5) 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 (A) shall neither (i) apply to any Security of any series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision nor (ii) modify the rights of the Holder of any such Security with respect to such provision or (B) shall become effective only when there is no such Security Outstanding; or
  - (6) to secure the Securities, including provisions regarding the circumstances under which collateral may be released or substituted; or
  - (7) to add or provide for a guaranty of the Securities or additional obligors on the Securities; or
  - (8) to establish the form or terms of Securities of any series as permitted by Sections 2.1 and 3.1; or
  - (9) 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; or
  - (10) to cure any ambiguity, to correct or supplement any provision herein which may be defective or inconsistent with any other provision herein, or to make any other provisions with respect to matters or questions arising under this Indenture, provided that such action pursuant to this clause (10) shall not adversely affect the interests of the Holders of Securities of any series in any material respect; or
  - (11) to supplement any of the provisions of the Indenture to such extent as shall be necessary to permit or facilitate the defeasance and discharge of any series of Securities pursuant to Articles 4 and 13, provided that any such action shall not adversely affect the interests of the Holders of Securities of such series or any other series of Securities in any material respect.
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## **Section 9.2 Supplemental Indentures with Consent of Holders.**

With the consent of the Holders of a majority in principal amount of the Outstanding Securities of each series affected by such supplemental indenture, by Act of said Holders delivered to the Company and the Trustee, the Company, when authorized by a Board Resolution, and the Trustee may also enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of modifying in any manner the rights of the Holders of Securities of such series under this Indenture; provided, however, that no such supplemental indenture shall, without the consent of the Holder of each Outstanding Security affected thereby,

(1) change the Stated Maturity of the principal of, or any installment of principal of or interest on, any Security, or reduce the principal amount thereof or the rate of interest thereon or any premium payable upon the redemption thereof, or reduce the amount of the principal of an Original Issue Discount Security or any other Security which would be due and payable upon a declaration of acceleration of the Maturity thereof pursuant to Section 5.2, or change the place of payment or the coin or currency in which, any Security or any premium or interest thereon is payable, or impair the right to institute suit for the enforcement of any such payment on or after the Stated Maturity thereof (or, in the case of redemption, on or after the Redemption Date), or modify the provisions of this Indenture in the case of Securities of any series that are convertible into Securities or other securities of the Company, adversely affect the right of Holders to convert any of the Securities of such series other than as provided in or pursuant to this Indenture, or

(2) reduce the percentage in principal amount of the Outstanding Securities of any series, the consent of whose Holders is required for any such supplemental indenture, or the consent of whose Holders is required for any waiver (of compliance with certain provisions of this Indenture or certain defaults hereunder and their consequences) provided for in this Indenture, or

(3) modify any of the provisions of this Section, Section 5.13 or Section 10.8, except to increase any such percentage or to provide that certain other provisions of this Indenture cannot be modified or waived without the consent of the Holder of each Outstanding Security affected thereby; provided, however, that this clause shall not be deemed to require the consent of any Holder with respect to changes in the references to “the Trustee” and concomitant changes in this Section and Section 10.8, or the deletion of this proviso, in accordance with the requirements of Sections 6.11 and 9.1(8), or

(4) if applicable, make any change that adversely affects the right to convert any security as provided in Article 14 or pursuant to Section 3.1 (except as permitted by Section 9.1(9)).

A supplemental indenture which changes or eliminates any covenant or other provision of this Indenture which has expressly been included solely for the benefit of one or more particular series of Securities, or which modifies the rights of the Holders of Securities of such series with respect to such covenant or other provision, shall be deemed not to affect the rights under this Indenture of the Holders of Securities of any other series. It shall not be necessary for any Act of Holders under this Section to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such Act shall approve the substance thereof.

## **Section 9.3 Execution of Supplemental Indentures.**

In executing, or accepting the additional trusts created by, any supplemental indenture permitted by this Article or the modifications thereby of the trusts created by this Indenture, the Trustee shall be entitled to receive, and (subject to Sections 6.1 and 6.3) shall be fully protected in relying upon, an Opinion of Counsel stating that the execution of such supplemental indenture is authorized or permitted by this Indenture. The Trustee may, but 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.

## **Section 9.4 Effect of Supplemental Indentures.**

Upon the execution of any supplemental indenture under this Article, this Indenture shall be modified in accordance therewith, and such supplemental indenture shall form a part of this Indenture for all purposes; and every Holder of Securities theretofore or thereafter authenticated and delivered hereunder shall be bound thereby.

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## **Section 9.5 Conformity with Trust Indenture Act.**

Every supplemental indenture executed pursuant to this Article shall conform to the requirements of the Trust Indenture Act.

## **Section 9.6 Reference in Securities to Supplemental Indentures.**

Securities of any series authenticated and delivered after the execution of any supplemental indenture pursuant to this Article may, and shall if required by the Trustee, bear a notation in form approved by the Trustee as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Securities of any series so modified as to conform, in the opinion of the Trustee and the Company, to any such supplemental indenture may be prepared and executed by the Company and authenticated and delivered by the Trustee in exchange for Outstanding Securities of such series.

# **ARTICLE 10**

## **COVENANTS**

### **Section 10.1 Payment of Principal, Premium and Interest.**

The Company covenants and agrees for the benefit of each series of Securities that it will duly and punctually pay the principal of and any premium and interest on the Securities of that series in accordance with the terms of the Securities and this Indenture.

### **Section 10.2 Maintenance of Office or Agency.**

The Company will maintain in each Place of Payment for any series of Securities an office or agency where Securities of that series may be presented or surrendered for payment, where Securities of that series may be surrendered for registration of transfer or exchange, where Securities of that series may be surrendered for conversion and where notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be served. The Company will give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, surrenders, notices and demands. Unless otherwise provided in a supplemental indenture or pursuant to Section 3.1 hereof, the Place of Payment for any series of Securities shall be the Corporate Trust Office of the Trustee.

The Company may also from time to time designate one or more other offices or agencies where the Securities of one or more series may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency in each Place of Payment for Securities of any series for such purposes. The Company will give prompt written notice to the Trustee of any such designation or rescission and of any change in the location of any such other office or agency.

### **Section 10.3 Money for Securities Payments to be Held in Trust.**

If the Company shall at any time act as its own Paying Agent with respect to any series of Securities, it will, on or before each due date of the principal of or any premium or interest on any of the Securities of that series, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay the principal and any premium and interest so becoming due until such sums shall be paid to such Persons or otherwise disposed of as herein provided and will promptly notify the Trustee of its action or failure so to act.

Whenever the Company shall have one or more Paying Agents for any series of Securities, it will, on or prior to each due date of the principal of or any premium or interest on any Securities of that series, deposit with a Paying Agent a sum sufficient to pay such amount, such sum to be held as provided by the Trust Indenture Act, and (unless such Paying Agent is the Trustee) the Company will promptly notify the Trustee of its action or failure so to act.

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The Company will cause each Paying Agent for any series of Securities other than the Trustee to execute and deliver to the Trustee an instrument in which such Paying Agent shall agree with the Trustee, subject to the provisions of this Section, that such Paying Agent will (1) comply with the provisions of the Trust Indenture Act applicable to it as a Paying Agent and (2) during the continuance of any default by the Company (or any other obligor upon the Securities of that series) in the making of any payment in respect of the Securities of that series, upon the written request of the Trustee, forthwith pay to the Trustee all sums held in trust by such Paying Agent for payment in respect of the Securities of that series.

The Company may at any time, for the purpose of obtaining the satisfaction and discharge of this Indenture or for any other purpose, pay, or by Company Order direct any Paying Agent to pay, to the Trustee all sums held in trust by the Company or such Paying Agent, such sums to be held by the Trustee upon the same trusts as those upon which such sums were held by the Company or such Paying Agent; and, upon such payment by any Paying Agent to the Trustee, such Paying Agent shall be released from all further liability with respect to such money.

Any money deposited with the Trustee or any Paying Agent, or then held by the Company, in trust for the payment of the principal of or any premium or interest on any Security of any series and remaining unclaimed for a period ending on the earlier of the date that is ten Business Days prior to the date such money would escheat to the State or two years after such principal, premium or interest has become due and payable shall be paid to the Company on Company Request, or (if then held by the Company) shall be discharged from such trust; and the Holder of such Security shall thereafter, as an unsecured general creditor, look only to the Company for payment thereof, and all liability of the Trustee or such Paying Agent with respect to such trust money, and all liability of the Company as trustee thereof, shall thereupon cease; provided, however, that the Trustee or such Paying Agent, before being required to make any such repayment, may at the expense of the Company cause to be published once, in a newspaper published in the English language, customarily published on each Business Day and of general circulation in each Place of Payment, notice that such money remains unclaimed and that, after a date specified therein, which shall not be less than 30 days from the date of such publication, any unclaimed balance of such money then remaining will be repaid to the Company.

#### **Section 10.4 Statement by Officers as to Default.**

The Company will deliver to the Trustee, within 120 days after the end of each fiscal year of the Company ending after the date hereof, an Officers' Certificate, stating whether or not to the best knowledge of the signers thereof the Company 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 Company shall be in default, specifying all such defaults and the nature and status thereof of which they may have knowledge. The fiscal year of the Company currently ends on December 31; and the Company will give the Trustee prompt written notice of any change of its fiscal year.

#### **Section 10.5 Existence.**

Subject to Article 8, the Company will do or cause to be done all things necessary to preserve and keep in full force and effect its existence.

#### **Section 10.6 Maintenance of Properties.**

The Company will cause all properties used or useful in the conduct of its business to be maintained and kept in good condition, repair and working order and supplied with all necessary equipment and will cause to be made all necessary repairs, renewals, replacements, betterments and improvements thereof, all as, and to the extent, in the judgment of the Company may be necessary so that the business carried on in connection therewith may be properly and advantageously conducted at all times; provided, however, that (i) the Company shall not be required to do so if the failure to do so would not have a material adverse effect on the assets, business, operations, properties or condition (financial or otherwise) of the Company and its subsidiaries, taken as a whole and (ii) nothing in this Section shall prevent the Company from discontinuing the operation or maintenance of any of such properties if such discontinuance is, in the judgment of the Company, desirable in the conduct of its business and not disadvantageous in any material respect to the Holders.

#### **Section 10.7 Payment of Taxes and Other Claims.**

The Company will pay or discharge or cause to be paid or discharged, before the same shall become delinquent, (1) all taxes, assessments and governmental charges levied or imposed upon the Company or upon the income, profits or

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property of the Company, and (2) all lawful claims for labor, materials and supplies which, if unpaid, might by law become a lien upon the property of the Company; provided, however, that the Company shall not be required to pay or discharge or cause to be paid or discharged any such tax, assessment, charge or claim (i) whose amount, applicability or validity is being contested in good faith by appropriate proceedings or (ii) if the failure to pay or discharge would not have a material adverse effect on the assets, business, operations, properties or condition (financial or otherwise) of the Company and its subsidiaries, taken as a whole.

#### **Section 10.8 Waiver of Certain Covenants.**

Except as otherwise specified as contemplated by Section 3.1 for Securities of such series, the Company may, with respect to the Securities of any series, omit in any particular instance to comply with any term, provision or condition set forth in any covenant provided pursuant to Section 3.1(19), 9.1(2), 9.1(7), 10.6 or 10.7 for the benefit of the Holders of such series if before the time for such compliance the Holders of at least a majority in principal amount of the Outstanding Securities of such series shall, by Act of such Holders, either waive such compliance in such instance or generally waive compliance with such term, provision or condition, but no such waiver shall extend to or affect such term, provision or condition except to the extent so expressly waived, and, until such waiver shall become effective, the obligations of the Company and the duties of the Trustee in respect of any such term, provision or condition shall remain in full force and effect.

### **ARTICLE 11**

#### **REDEMPTION OF SECURITIES**

##### **Section 11.1 Applicability of Article.**

Securities of any series that are redeemable before their Stated Maturity shall be redeemable in accordance with their terms and (except as otherwise specified as contemplated by Section 3.1 for such Securities) in accordance with this Article.

##### **Section 11.2 Election to Redeem; Notice to Trustee.**

The election of the Company to redeem any Securities shall be evidenced by a Board Resolution or in another manner specified as contemplated by Section 3.1 for such Securities. In case of any redemption at the election of the Company of less than all the Securities of any series (including any such redemption affecting only a single Security), the Company shall, at least 45 days prior to the Redemption Date fixed by the Company (unless a shorter notice shall be satisfactory to the Trustee), notify the Trustee of such Redemption Date, of the principal amount of Securities of such series to be redeemed and, if applicable, of the tenor of the Securities to be redeemed. In the case of any redemption of Securities prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture, the Company shall furnish the Trustee with an Officers' Certificate evidencing compliance with such restriction.

##### **Section 11.3 Selection by Trustee of Securities to Be Redeemed.**

If less than all the Securities of any series are to be redeemed (unless all the Securities of such series and of a specified tenor are to be redeemed or unless such redemption affects only a single Security), the particular Securities to be redeemed shall be selected not more than 45 days prior to the Redemption Date by the Trustee, from the Outstanding Securities of such series not previously called for redemption, by lot, or in the Trustee's discretion, on a pro-rata basis, provided that the unredeemed portion of the principal amount of any Security shall be in an authorized denomination (which shall not be less than the minimum authorized denomination) for such Security. If less than all the Securities of such series and of a specified tenor are to be redeemed (unless such redemption affects only a single Security), the particular Securities to be redeemed shall be selected not more than 45 days prior to the Redemption Date by the Trustee, from the Outstanding Securities of such series and specified tenor not previously called for redemption in accordance with the preceding sentence.

If any Security selected for partial redemption is converted in part before termination of the conversion right with respect to the portion of the Security so selected, the converted portion of such Security shall be deemed (so far as may be) to be the portion selected for redemption. Securities that have been converted during a selection of Securities to be redeemed shall be treated by the Trustee as Outstanding for the purpose of such selection.

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The Trustee shall promptly notify the Company in writing of the Securities selected for redemption as aforesaid and, in case of any Securities selected for partial redemption as aforesaid, the principal amount thereof to be redeemed.

The provisions of the two preceding paragraphs shall not apply with respect to any redemption affecting only a single Security, whether such Security is to be redeemed in whole or in part. In the case of any such redemption in part, the unredeemed portion of the principal amount of the Security shall be in an authorized denomination (which shall not be less than the minimum authorized denomination) for such Security.

For all purposes of this Indenture, unless the context otherwise requires, all provisions relating to the redemption of Securities shall relate, in the case of any Securities redeemed or to be redeemed only in part, to the portion of the principal amount of such Securities which has been or is to be redeemed.

#### **Section 11.4 Notice of Redemption.**

Notice of redemption shall be given by first-class mail, postage prepaid, mailed not fewer than 30 nor more than 60 days prior to the Redemption Date, unless a shorter period is specified in the Securities to be redeemed, to each Holder of Securities to be redeemed, at its address appearing in the Security Register.

All notices of redemption shall state:

- (1) the Redemption Date,
- (2) the Redemption Price (including accrued interest, if any),
- (3) if less than all the Outstanding Securities of any series consisting of more than a single Security are to be redeemed, the identification (and, in the case of partial redemption of any such Securities, the principal amounts) of the particular Securities to be redeemed and, if less than all the Outstanding Securities of any series consisting of a single Security are to be redeemed, the principal amount of the particular Security to be redeemed,
- (4) in case any Security is to be redeemed in part only, that on and after the Redemption Date, upon surrender of such Security, the Holder of such Security will receive, without charge, a new Security or Securities of authorized denominations for the principal amount thereof remaining unredeemed,
- (5) that on the Redemption Date the Redemption Price will become due and payable upon each such Security to be redeemed and, if applicable, that interest thereon will cease to accrue on and after said date,
- (6) the place or places where each such Security is to be surrendered for payment of the Redemption Price,
- (7) if applicable, the conversion price or conversion rate, as the case may be, the date on which the right to convert the principal of the Securities or the portions thereof to be redeemed will terminate, and the place or places where such Securities may be surrendered for conversion,
- (8) that the redemption is for a sinking fund, if such is the case, and
- (9) the CUSIP number or numbers and/or common codes of the Security being redeemed.

Notice of redemption of Securities to be redeemed at the election of the Company shall be given by the Company or, at the Company's request, by the Trustee in the name and at the expense of the Company and shall be irrevocable.

#### **Section 11.5 Deposit of Redemption Price.**

On or prior to any Redemption Date, the Company shall deposit with the Trustee or with a Paying Agent (or, if the Company is acting as its own Paying Agent, segregate and hold in trust as provided in Section 10.3) an amount of money sufficient to pay the Redemption Price of, and (except if the Redemption Date shall be an Interest Payment Date) accrued interest on, all the Securities which are to be redeemed on that date.

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If any Security called for redemption is converted, any money deposited with the Trustee or with a Paying Agent or so segregated and held in trust for the redemption of such Security shall (subject to the right of any Holder of such Security to receive interest as provided in the last paragraph of Section 3.7) be paid to the Company on Company Request, or if then held by the Company, shall be discharged from such trust.

#### **Section 11.6 Securities Payable on Redemption Date.**

Notice of redemption having been given as aforesaid, the Securities so to be redeemed shall, on the Redemption Date, become due and payable at the Redemption Price therein specified, and from and after such date (unless the Company shall default in the payment of the Redemption Price and accrued interest) such Securities shall cease to bear interest. Upon surrender of any such Security for redemption in accordance with said notice, such Security shall be paid by the Company at the Redemption Price, together with accrued interest to the Redemption Date; provided, however, that, unless otherwise specified as contemplated by Section 3.1, installments of interest whose Stated Maturity is on or prior to the Redemption Date will be payable to the Holders of such Securities, or one or more Predecessor Securities, registered as such at the close of business on the relevant Record Dates according to their terms and the provisions of Section 3.7.

If any Security called for redemption shall not be so paid upon surrender thereof for redemption, the principal and any premium shall, until paid, bear interest from the Redemption Date at the rate prescribed therefor in the Security.

#### **Section 11.7 Securities Redeemed in Part.**

Any Security which is to be redeemed only in part shall be surrendered at a Place of Payment therefor (with, if the Company or the Trustee so requires, due endorsement by, or a written instrument of transfer in form satisfactory to the Company and the Trustee duly executed by, the Holder thereof or its attorney duly authorized in writing), and the Company shall execute, and the Trustee shall authenticate and deliver to the Holder of such Security without service charge, a new Security or Securities of the same series and of like tenor, of any authorized denomination as requested by such Holder, in aggregate principal amount equal to and in exchange for the unredeemed portion of the principal of the Security so surrendered.

### **ARTICLE 12**

#### **SINKING FUNDS**

##### **Section 12.1 Applicability of Article.**

The provisions of this Article shall be applicable to any sinking fund for the retirement of Securities of any series except as otherwise specified as contemplated by Section 3.1 for such Securities.

The minimum amount of any sinking fund payment provided for by the terms of any Securities 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 such Securities is herein referred to as an "optional sinking fund payment." If provided for by the terms of any Securities, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 12.2. Each sinking fund payment shall be applied to the redemption of Securities as provided for by the terms of such Securities.

##### **Section 12.2 Satisfaction of Sinking Fund Payments with Securities.**

The Company (1) may deliver Outstanding Securities of a series (other than any previously called for redemption) and (2) may apply as a credit Securities of a series which have been redeemed either at the election of the Company pursuant to the terms of such Securities or through the application of permitted optional sinking fund payments pursuant to the terms of such Securities, in each case in satisfaction of all or any part of any sinking fund payment with respect to any Securities of such series required to be made pursuant to the terms of such Securities as and to the extent provided for by the terms of such Securities; provided that the Securities to be so credited have not been previously so credited. The Securities to be so credited shall be received and credited for such purpose by the Trustee at the Redemption Price, as specified in the Securities so to be redeemed, for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly.

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### **Section 12.3 Redemption of Securities for Sinking Fund.**

Not fewer than 60 days prior to each sinking fund payment date for any Securities, the Company will deliver to the Trustee an Officers' Certificate specifying the amount of the next ensuing sinking fund payment for such Securities pursuant to the terms of such Securities, the portion thereof, if any, which is to be satisfied by payment of cash and the portion thereof, if any, which is to be satisfied by delivering and crediting Securities pursuant to Section 12.2 and will also deliver to the Trustee any Securities to be so delivered. Not fewer than 30 days prior to each such sinking fund payment date, the Trustee shall select the Securities to be redeemed upon such sinking fund payment date in the manner specified in Section 11.3 and cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in Section 11.4. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Sections 11.6 and 11.7.

## **ARTICLE 13**

### **DEFEASANCE AND COVENANT DEFEASANCE**

#### **Section 13.1 Company's Option to Effect Defeasance or Covenant Defeasance.**

The Company may elect, at its option at any time, to have Section 13.2 or Section 13.3 applied to any Securities or any series of Securities, as the case may be, designated pursuant to Section 3.1 as being defeasible pursuant to such Section 13.2 or 13.3, in accordance with any applicable requirements provided pursuant to Section 3.1 and upon compliance with the conditions set forth below in this Article. Any such election shall be evidenced by a Board Resolution or in another manner specified as contemplated by Section 3.1 for such Securities.

#### **Section 13.2 Defeasance and Discharge.**

Upon the Company's exercise of its option (if any) to have this Section applied to any Securities or any series of Securities, as the case may be, the Company shall be deemed to have been discharged from its obligations with respect to such Securities as provided in this Section on and after the date the conditions set forth in Section 13.4 are satisfied (hereinafter called "Defeasance"). For this purpose, such Defeasance means that the Company shall be deemed to have paid and discharged the entire indebtedness represented by such Securities and to have satisfied all its other obligations under such Securities and this Indenture insofar as such Securities are concerned (and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging the same), subject to the following which shall survive until otherwise terminated or discharged hereunder:

- (1) the rights of Holders of such Securities to receive, solely from the trust fund described in Section 13.4 and as more fully set forth in such Section, payments in respect of the principal of and any premium and interest on such Securities when payments are due,
- (2) the Company's obligations with respect to such Securities under Sections 3.4, 3.5, 3.6, 10.2 and 10.3, and, if applicable, Article 14,
- (3) the rights, powers, trusts, duties and immunities of the Trustee hereunder, and
- (4) this Article.

Subject to compliance with this Article, the Company may exercise its option (if any) to have this Section applied to any Securities notwithstanding the prior exercise of its option (if any) to have Section 13.3 applied to such Securities.

#### **Section 13.3 Covenant Defeasance.**

Upon the Company's exercise of its option (if any) to have this Section applied to any Securities or any series of Securities, as the case maybe,

- (1) the Company shall be released from its obligations under Sections 10.6 and 10.7 and any covenants provided pursuant to Sections 3.1(19), 9.1(2) or 9.1(7) for the benefit of the Holders of such Securities,
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(2) the occurrence of any event specified in Sections 5.1(4) (with respect to any of Sections 10.6 and 10.7 and any such covenants provided pursuant to Section 3.1(19), 9.1(2) or 9.1(7)) and the occurrence of any Event of Default specified pursuant to Section 3.1, shall be deemed not to be or result in an Event of Default, in each case with respect to such Securities or series of Securities as provided in this Section on and after the date the conditions set forth in Section 13.4 are satisfied (hereinafter called "Covenant Defeasance"). For this purpose, such Covenant Defeasance means that, with respect to such Securities, the Company may omit to comply with and shall have no liability in respect of any term, condition or limitation set forth in any such specified Section (to the extent so specified in the case of Section 5.1(4) and the occurrence of any Event of Default specified pursuant to Section 3.1), whether directly or indirectly by reason of any reference elsewhere herein to any such Section or Article or by reason of any reference in any such Section or Article to any other provision herein or in any other document, but the remainder of this Indenture and such Securities shall be unaffected thereby.

#### **Section 13.4 Conditions to Defeasance or Covenant Defeasance.**

The following shall be the conditions to the application of Section 13.2 or Section 13.3 to any Securities or any series of Securities, as the case may be:

- (1) The Company shall irrevocably have deposited or caused to be deposited with the Trustee (or another trustee which satisfies the requirements contemplated by Section 6.9 and agrees to comply with the provisions of this Article applicable to it) as trust funds in trust for the purpose of making the following payments, specifically pledged as security for, and dedicated solely to, the benefits of the Holders of such Securities,
  - (A) in the case of Securities of a series denominated in currency of the United States of America,
    - (i) cash in currency of the United States of America in an amount, or
    - (ii) U.S. Government Obligations which through the scheduled payment of principal and interest in respect thereof in accordance with their terms will provide, not later than one day before the due date of any payment, an amount in cash, or
    - (iii) a combination thereof, or
  - (B) in the case of Securities of a series denominated in currency other than that of the United States of America,
    - (i) cash in the currency in which such series of Securities is denominated in an amount, or
    - (ii) Foreign Government Obligations which through the scheduled payment of principal and interest in respect thereof in accordance with their terms will provide, not later than one day before the due date of any payment, an amount in cash, or
    - (iii) a combination thereof,

in each case sufficient, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay and discharge, and which shall be applied by the Trustee (or any such other qualifying trustee) to pay and discharge, the principal of and any premium and interest on such Securities on the respective Stated Maturities, in accordance with the terms of this Indenture and such Securities.

- (2) In the event of an election to have Section 13.2 apply to any Securities or any series of Securities, as the case may be, the Company shall have delivered to the Trustee an Opinion of Counsel stating that
    - (A) the Company 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, and
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(C) 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 amount, in the same manner and at the same times as would be the case if such deposit, Defeasance and discharge were not to occur.

(3) In the event of an election to have Section 13.3 apply to any Securities or any series of Securities, as the case may be, the Company 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.

(4) The Company shall have delivered to the Trustee an Officers' Certificate to the effect that neither such Securities nor any other Securities of the same series, if then listed on any securities exchange, will be delisted as a result of such deposit.

(5) No event which is, or after notice or lapse of time or both would become, an Event of Default with respect to such Securities or any other Securities shall have occurred and be continuing at the time of such deposit or, with regard to any such event specified in Sections 5.1(5) and (6), at any time on or prior to the 90th day after the date of such deposit (it being understood that this condition shall not be deemed satisfied until after such 90th day).

(6) Such Defeasance or Covenant Defeasance shall not cause the Trustee to have a conflicting interest within the meaning of the Trust Indenture Act (assuming all Securities are in default within the meaning of such Act).

(7) Such Defeasance or Covenant Defeasance shall not result in a breach or violation of, or constitute a default under, this Indenture or any other agreement or instrument to which the Company is a party or by which it is bound.

(8) Such Defeasance or Covenant Defeasance shall not result in the trust arising from such deposit constituting an investment company within the meaning of the Investment Company Act unless such trust shall be registered under such Act or exempt from registration thereunder.

(9) The Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent with respect to such Defeasance or Covenant Defeasance have been complied with.

### **Section 13.5 Deposited Money, U.S. Government Obligations and Foreign Government Obligations to be Held in Trust; Miscellaneous Provisions.**

Subject to the provisions of the last paragraph of Section 10.3, all money, U.S. Government Obligations and Foreign Government Obligations (including the proceeds thereof) deposited with the Trustee or other qualifying trustee (solely for purposes of this Section and Section 13.6, the Trustee and any such other trustee are referred to collectively as the "Trustee") pursuant to Section 13.4 in respect of any Securities shall be held in trust and applied by the Trustee, in accordance with the provisions of such Securities and this Indenture, to the payment, either directly or through any such Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the Holders of such Securities, of all sums due and to become due thereon in respect of principal and any premium and interest, but money so held in trust need not be segregated from other funds except to the extent required by law. Money, U.S. Government Obligations and Foreign Government Obligations so held in trust shall not be subject to the provisions of Article 15.

The Company 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 13.4 or the principal and interest received in respect thereof other than any such tax, fee or other charge which by law is for the account of the Holders of Outstanding Securities.

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Anything in this Article to the contrary notwithstanding, the Trustee shall deliver or pay to the Company from time to time upon Company Request any money, U.S. Government Obligations or Foreign Government Obligations held by it as provided in Section 13.4 with respect to any Securities which, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, are in excess of the amount thereof which would then be required to be deposited to effect the Defeasance or Covenant Defeasance, as the case may be, with respect to such Securities.

#### **Section 13.6 Reinstatement.**

If the Trustee or the Paying Agent is unable to apply any money in accordance with this Article with respect to any Securities by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, then the obligations under this Indenture and such Securities from which the Company has been discharged or released pursuant to Section 13.2 or 13.3 shall be revived and reinstated as though no deposit had occurred pursuant to this Article with respect to such Securities, until such time as the Trustee or Paying Agent is permitted to apply all money held in trust pursuant to Section 13.5 with respect to such Securities in accordance with this Article; provided, however, that if the Company makes any payment of principal of or any premium or interest on any such Security following such reinstatement of its obligations, the Company shall be subrogated to the rights (if any) of the Holders of such Securities to receive such payment from the money so held in trust.

### **ARTICLE 14**

#### **CONVERSION OF SECURITIES**

##### **Section 14.1 Applicability of Article.**

The provisions of this Article shall be applicable to the Securities of any series which are convertible into shares of Common Stock of the Company, and the issuance of such shares of Common Stock upon the conversion of such Securities, except as otherwise specified as contemplated by Section 3.1 for the Securities of such series.

##### **Section 14.2 Exercise of Conversion Privilege.**

In order to exercise a conversion privilege, the Holder of a Security of a series with such a privilege shall surrender such Security to the Company at the office or agency maintained for that purpose pursuant to Section 10.2, accompanied by a duly executed conversion notice to the Company substantially in the form set forth in Section 2.6 stating that the Holder elects to convert such Security or a specified portion thereof. Such notice shall also state, if different from the name and address of such Holder, the name or names (with address) in which the certificate or certificates for shares of Common Stock, which shall be issuable on such conversion, shall be issued. Securities surrendered for conversion shall (if so required by the Company or the Trustee) be duly endorsed by or accompanied by instruments of transfer in forms satisfactory to the Company and the Trustee duly executed by the Holder or its attorney duly authorized in writing; and Securities so surrendered for conversion (in whole or in part) during the period from the close of business on any Regular Record Date to the opening of business on the next succeeding Interest Payment Date (excluding Securities or portions thereof called for redemption during the period beginning at the close of business on a Regular Record Date and ending at the opening of business on the first Business Day after the next succeeding Interest Payment Date, or if such Interest Payment Date is not a Business Day, the second such Business Day) shall also be accompanied by payment in funds acceptable to the Company of an amount equal to the interest payable on such Interest Payment Date on the principal amount of such Security then being converted, and such interest shall be payable to such Holder notwithstanding the conversion of such Security, subject to the provisions of Section 3.7 relating to the payment of Defaulted Interest by the Company. As promptly as practicable after the receipt of such notice and of any payment required pursuant to a Board Resolution and, subject to Section 3.3, set forth, or determined in the manner provided, in an Officers' Certificate, or established in one or more indentures supplemental hereto setting forth the terms of such series of Security, and the surrender of such Security in accordance with such reasonable regulations as the Company may prescribe, the Company shall issue and shall deliver, at the office or agency at which such Security is surrendered, to such Holder or on its written order, a certificate or certificates for the number of full shares of Common Stock issuable upon the conversion of such Security (or specified portion thereof), in accordance with the provisions of such Board Resolution, Officers' Certificate or supplemental indenture, and cash as provided therein in respect of any fractional share of such Common Stock otherwise issuable upon such conversion. Such conversion shall be deemed to have been effected immediately prior to the close of business on the date on which such notice and such payment, if required,

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shall have been received in proper order for conversion by the Company and such Security shall have been surrendered as aforesaid (unless such Holder shall have so surrendered such Security and shall have instructed the Company to effect the conversion on a particular date following such surrender and such Holder shall be entitled to convert such Security on such date, in which case such conversion shall be deemed to be effected immediately prior to the close of business on such date) and at such time the rights of the Holder of such Security as such Security Holder shall cease and the Person or Persons in whose name or names any certificate or certificates for shares of Common Stock of the Company shall be issuable upon such conversion shall be deemed to have become the Holder or Holders of record of the shares represented thereby. Except as set forth above and subject to the final paragraph of Section 3.7, no payment or adjustment shall be made upon any conversion on account of any interest accrued on the Securities (or any part thereof) surrendered for conversion or on account of any dividends on the Common Stock of the Company issued upon such conversion.

In the case of any Security which is converted in part only, upon such conversion the Company shall execute and the Trustee shall authenticate and deliver to or on the order of the Holder thereof, at the expense of the Company, a new Security or Securities of the same series, of authorized denominations, in aggregate principal amount equal to the unconverted portion of such Security.

#### **Section 14.3 No Fractional Shares.**

No fractional share of Common Stock of the Company shall be issued upon conversions of Securities of any series. If more than one Security shall be surrendered for conversion at one time by the same Holder, the number of full shares which shall be issuable upon conversion shall be computed on the basis of the aggregate principal amount of the Securities (or specified portions thereof to the extent permitted hereby) so surrendered. If, except for the provisions of this Section 14.3, any Holder of a Security or Securities would be entitled to a fractional share of Common Stock of the Company upon the conversion of such Security or Securities, or specified portions thereof, the Company shall pay to such Holder an amount in cash equal to the current market value of such fractional share computed, (i) if such Common Stock is listed or admitted to unlisted trading privileges on a national securities exchange or market, on the basis of the last reported sale price regular way on such exchange or market on the last trading day prior to the date of conversion upon which such a sale shall have been effected, or (ii) if such Common Stock is not at the time so listed or admitted to unlisted trading privileges on a national securities exchange or market, on the basis of the average of the bid and asked prices of such Common Stock in the over-the-counter market, on the last trading day prior to the date of conversion, as reported by the National Quotation Bureau, Incorporated or similar organization if the National Quotation Bureau, Incorporated is no longer reporting such information, or if not so available, the fair market price as determined by the Board of Directors. For purposes of this Section, "trading day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday other than any day on which the Common Stock is not traded on the Nasdaq Global Market, or if the Common Stock is not traded on the Nasdaq Global Market, on the principal exchange or market on which the Common Stock is traded or quoted.

#### **Section 14.4 Adjustment of Conversion Price or Conversion Rate.**

The conversion price or conversion rate, as the case may be, of Securities of any series that is convertible into Common Stock of the Company shall be adjusted for any stock dividends, stock splits, reclassifications, combinations or similar transactions in accordance with the terms of the supplemental indenture or Board Resolutions setting forth the terms of the Securities of such series.

Whenever the conversion price or conversion rate, as the case may be, is adjusted, the Company shall compute the adjusted conversion price or conversion rate, as the case may be, in accordance with terms of the applicable Board Resolution or supplemental indenture and shall prepare an Officers' Certificate setting forth the adjusted conversion price or conversion rate, as the case may be, and showing in reasonable detail the facts upon which such adjustment is based, and such certificate shall forthwith be filed at each office or agency maintained for the purpose of conversion of Securities pursuant to Section 10.2 and, if different, with the Trustee. The Company shall forthwith cause a notice setting forth the adjusted conversion price or conversion rate, as the case may be, to be mailed, first class postage prepaid, to each Holder of Securities of such series at its address appearing on the Security Register and to any conversion agent other than the Trustee.

#### **Section 14.5 Notice of Certain Corporate Actions.**

In case:

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(1) the Company shall declare a dividend (or any other distribution) on its Common Stock payable otherwise than in cash out of its retained earnings (other than a dividend for which approval of any shareholders of the Company is required) that would require an adjustment pursuant to Section 14.4; or

(2) the Company shall authorize the granting to all or substantially all of the holders of its Common Stock of rights, options or warrants to subscribe for or purchase any shares of capital stock of any class or of any other rights (other than any such grant for which approval of any shareholders of the Company is required); or

(3) of any reclassification of the Common Stock of the Company (other than a subdivision or combination of its outstanding shares of Common Stock, or of any consolidation, merger or share exchange to which the Company is a party and for which approval of any shareholders of the Company is required), or of the sale of all or substantially all of the assets of the Company; or

(4) of the voluntary or involuntary dissolution, liquidation or winding up of the Company;

then the Company shall cause to be filed with the Trustee, and shall cause to be mailed to all Holders at their last addresses as they shall appear in the Security Register, at least 20 days (or 10 days in any case specified in clause (1) or (2) above) prior to the applicable record date hereinafter specified, a notice stating (i) the date on which a record is to be taken for the purpose of such dividend, distribution, rights, options or warrants, or, if a record is not to be taken, the date as of which the holders of Common Stock of record to be entitled to such dividend, distribution, rights, options or warrants are to be determined, or (ii) the date on which such reclassification, consolidation, merger, share exchange, sale, dissolution, liquidation or winding up is expected to become effective, and the date as of which it is expected that holders of Common Stock of record shall be entitled to exchange their shares of Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, share exchange, sale, dissolution, liquidation or winding up. If at any time the Trustee shall not be the conversion agent, a copy of such notice shall also forthwith be filed by the Company with the Trustee.

#### **Section 14.6 Reservation of Shares of Common Stock.**

The Company shall at all times reserve and keep available, free from preemptive rights, out of its authorized but unissued Common Stock, for the purpose of effecting the conversion of Securities, the full number of shares of Common Stock of the Company then issuable upon the conversion of all outstanding Securities of any series that has conversion rights.

#### **Section 14.7 Payment of Certain Taxes upon Conversion.**

Except as provided in the next sentence, the Company will pay any and all taxes that may be payable in respect of the issue or delivery of shares of its Common Stock on conversion of Securities pursuant hereto. The Company shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issue and delivery of shares of its Common Stock in a name other than that of the Holder of the Security or Securities to be converted, and no such issue or delivery shall be made unless and until the Person requesting such issue has paid to the Company the amount of any such tax, or has established, to the satisfaction of the Company, that such tax has been paid.

#### **Section 14.8 Nonassessability.**

The Company covenants that all shares of its Common Stock that may be issued upon conversion of Securities will upon issue in accordance with the terms hereof be duly and validly issued and fully paid and nonassessable.

#### **Section 14.9 Provision in Case of Consolidation, Merger or Sale of Assets.**

In case of any consolidation or merger of the Company with or into any other Person, any merger of another Person with or into the Company (other than a merger which does not result in any reclassification, conversion, exchange or cancellation of outstanding shares of Common Stock of the Company) or any conveyance, sale, transfer or lease of all or substantially all of the assets of the Company, the Person formed by such consolidation or resulting from such merger or which acquires such assets, as the case may be, shall execute and deliver to the Trustee a supplemental indenture providing that the Holder of each Security of a series then Outstanding that is convertible into Common Stock of the Company shall have the right thereafter (which right shall be the exclusive conversion right thereafter available to said Holder), during the period such Security shall be convertible, to convert such Security only into the kind and amount of securities, cash and other

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property receivable upon such consolidation, merger, conveyance, sale, transfer or lease by a holder of the number of shares of Common Stock of the Company into which such Security might have been converted immediately prior to such consolidation, merger, conveyance, sale, transfer or lease, assuming such holder of Common Stock of the Company (i) is not a Person with which the Company consolidated or merged with or into or which merged into or with the Company or to which such conveyance, sale, transfer or lease was made, as the case may be (a "Constituent Person"), or an Affiliate of a Constituent Person and (ii) failed to exercise such holder's rights of election, if any, as to the kind or amount of securities, cash and other property receivable upon such consolidation, merger, conveyance, sale, transfer or lease (provided that if the kind or amount of securities, cash and other property receivable upon such consolidation, merger, conveyance, sale, transfer, or lease is not the same for each share of Common Stock of the Company held immediately prior to such consolidation, merger, conveyance, sale, transfer or lease by others than a Constituent Person or an Affiliate thereof and in respect of which such rights of election shall not have been exercised ("Non-electing Share"), then for the purpose of this Section 14.9 the kind and amount of securities, cash and other property receivable upon such consolidation, merger, conveyance, sale, transfer or lease by the holders of each Non-electing Share shall be deemed to be the kind and amount so receivable per share by a plurality of the Non-electing Shares). Such supplemental indenture shall provide for adjustments which, for events subsequent to the effective date of such supplemental indenture, shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article or in accordance with the terms of the supplemental indenture or Board Resolutions setting forth the terms of such adjustments. The above provisions of this Section 14.9 shall similarly apply to successive consolidations, mergers, conveyances, sales, transfers or leases. Notice of the execution of such a supplemental indenture shall be given by the Company to the Holder of each Security of a series that is convertible into Common Stock of the Company as provided in Section 1.6 promptly upon such execution.

Neither the Trustee nor any conversion agent, if any, shall be under any responsibility to determine the correctness of any provisions contained in any such supplemental indenture relating either to the kind or amount of shares of stock or other securities or property or cash receivable by Holders of Securities of a series convertible into Common Stock of the Company upon the conversion of their Securities after any such consolidation, merger, conveyance, transfer, sale or lease or to any such adjustment, but may accept as conclusive evidence of the correctness of any such provisions, and shall be protected in relying upon, an Opinion of Counsel with respect thereto, which the Company shall cause to be furnished to the Trustee upon request.

#### **Section 14.10 Duties of Trustee Regarding Conversion.**

Neither the Trustee nor any conversion agent shall at any time be under any duty or responsibility to any Holder of Securities of any series that is convertible into Common Stock of the Company to determine whether any facts exist which may require any adjustment of the conversion price or conversion rate, as the case may be, or with respect to the nature or extent of any such adjustment when made, or with respect to the method employed, whether herein or in any supplemental indenture, any resolutions of the Board of Directors or written instrument executed by one or more officers of the Company provided to be employed in making the same. Neither the Trustee nor any conversion agent shall be accountable with respect to the validity or value (or the kind or amount) of any shares of Common Stock of the Company, or of any securities or property, which may at any time be issued or delivered upon the conversion of any Securities and neither the Trustee nor any conversion agent makes any representation with respect thereto. Subject to the provisions of Section 6.1, neither the Trustee nor any conversion agent shall be responsible for any failure of the Company to issue, transfer or deliver any shares of its Common Stock or stock certificates or other securities or property upon the surrender of any Security for the purpose of conversion or to comply with any of the covenants of the Company contained in this Article 14 or in the applicable supplemental indenture, resolutions of the Board of Directors or written instrument executed by one or more duly authorized officers of the Company.

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**Section 14.11 Repayment of Certain Funds upon Conversion.**

Any funds which at any time shall have been deposited by the Company or on its behalf with the Trustee or any other paying agent for the purpose of paying the principal of, and premium, if any, and interest, if any, on any of the Securities (including, but not limited to, funds deposited for the sinking fund referred to in Article 12 hereof and funds deposited pursuant to Article 13 hereof) and which shall not be required for such purposes because of the conversion of such Securities as provided in this Article 14 shall after such conversion be repaid to the Company by the Trustee upon the Company's written request.

Cassava Sciences, Inc.

By: \_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_,  
as Trustee

By: \_\_\_\_\_  
Title: \_\_\_\_\_

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CASSAVA SCIENCES, INC.

TO

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AS TRUSTEE

INDENTURE

DATED AS OF \_\_\_\_\_, 20

SUBORDINATED DEBT SECURITIES

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Certain Sections of this Indenture relating to Sections 310 through 318, inclusive, of the Trust Indenture Act of 1939:

Section 310	(a)(1)	6.9
	(a)(2)	6.9
	(a)(3)	Not Applicable
	(a)(4)	Not Applicable
	(b)	6.8, 6.10
Section 311	(a)	6.13
	(b)	6.13
Section 312	(a)	7.1, 7.2
	(b)	7.2
	(c)	7.2
Section 313	(a)	7.3
	(b)	7.3
	(c)	7.3
	(d)	7.3
Section 314	(a)	7.4
	(a)(4)	10.1, 10.4
	(b)	Not Applicable
	(c)(1)	1.2
	(c)(2)	1.2
	(c)(3)	Not Applicable
	(d)	Not Applicable
	(e)	1.2
Section 315	(a)	6.1
	(b)	6.2
	(c)	6.1
	(d)	6.1
	(e)	5.14
Section 316	(a)	1.1
	(a)(1)(A)	5.2, 5.12
	(a)(1)(B)	5.13
	(a)(2)	Not Applicable
	(b)	5.8
	(c)	1.4
Section 317	(a)(1)	5.3
	(a)(2)	5.4
	(b)	10.3
Section 318	(a)	1.7

NOTE: This reconciliation and tie shall not, for any purpose, be deemed to be a part of the Indenture

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INDENTURE, dated as of , 20 , between Cassava Sciences, Inc., a corporation duly organized and existing under the laws of the State of Delaware (herein called the “Company”), having its principal executive office at 7801 N Capital of Texas Highway, Suite 260, Austin, Texas and , as Trustee (herein called the “Trustee”).

## **RECITALS OF THE COMPANY**

The Company has duly authorized the execution and delivery of this Indenture to provide for the issuance from time to time of its unsecured subordinated debentures, notes or other evidences of indebtedness (herein called the “Securities”), to be issued in one or more series as provided in this Indenture.

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

## **NOW, THEREFORE, THIS INDENTURE WITNESSETH:**

For and in consideration of the premises and the purchase of the Securities by the Holders thereof, it is mutually covenanted and agreed, for the equal and proportionate benefit of all Holders of the Securities or of series thereof appertaining, as follows:

## **ARTICLE 1**

### **DEFINITIONS AND OTHER PROVISIONS OF GENERAL APPLICATION**

#### **Section 1.1 Definitions.**

For all purposes of this Indenture, except as otherwise expressly provided or unless the context otherwise requires:

(1)the terms defined in this Article have the meanings assigned to them in this Article and include the plural as well as the singular;

(2)all other terms used herein which are defined in the Trust Indenture Act, either directly or by reference therein, have the meanings assigned to them therein;

(3)all accounting terms not otherwise defined herein have the meanings assigned to them in accordance with generally accepted accounting principles in the United States of America, and, except as otherwise herein expressly provided, the term “generally accepted accounting principles” with respect to any computation required or permitted hereunder shall mean such accounting principles in the United States of America as are generally accepted at the date of such computation;

(4)all references to “\$” refer to the lawful currency of the United States of America;

(5)unless the context otherwise requires, any reference to an “Article” or a “Section” refers to an Article or a Section, as the case may be, of this Indenture; and

(6)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.

“Act,” when used with respect to any Holder, has the meaning specified in Section 1.4.

“Additional Interest” has the meaning specified in Section 5.2(b).

“Affiliate” of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person.

“Authenticating Agent” means any Person authorized by the Trustee pursuant to Section 6.14 to act on behalf of the Trustee to authenticate Securities of one or more series.

“Board of Directors” means either the board of directors of the Company or any duly authorized committee of that board empowered to act for it with respect to this Indenture.

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

“Business Day,” when used with respect to any Place of Payment, means each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in that Place of Payment are authorized or obligated by law or executive order to close.

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

“Common Stock” includes any stock of any class of the Company which has no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding-up of the Company and which is not subject to redemption by the Company; provided, however, subject to the provisions of Section 14.9, shares issuable upon conversion of Securities shall include only shares of the class designated as Common Stock of the Company at the date of this Indenture or shares of any class or classes resulting from any reclassification or reclassifications thereof and which have no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding-up of the Company and which are not subject to redemption by the Company; provided, further, that if at any time there shall be more than one such resulting class, the shares of each such class then so issuable shall be substantially in the proportion which the total number of shares of such class resulting from all such reclassifications bears to the total number of shares of all such classes resulting from all such reclassifications.

“Company” means the corporation named as the “Company” in the first paragraph of this instrument until a successor Person shall have become such pursuant to the applicable provisions of this Indenture, and thereafter “Company” shall mean such successor Person.

“Company Request” or “Company Order” means a written request or order signed in the name of the Company by its Chairman of the Board, its Vice Chairman of the Board, its Chief Executive Officer, its President or a Vice President, and by its principal financial officer, its Treasurer, an Assistant Treasurer, its Secretary or an Assistant Secretary, and delivered to the Trustee.

“Constituent Person” has the meaning specified in Section 14.9.

“control” when used with respect to any specified Person means the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms “controlling” and “controlled” have meanings correlative to the foregoing.

“Corporate Trust Office” means the corporate trust office of the Trustee at , Attention: Corporate Trust Department, or such other office, designated by the Trustee by written notice to the Company, at which at any particular time its corporate trust business shall be administered.

“corporation” means a corporation, association, company, joint-stock company or business trust.

“Covenant Defeasance” has the meaning specified in Section 13.3.

“Defaulted Interest” has the meaning specified in Section 3.7.

“Defeasance” has the meaning specified in Section 13.2.

“Depository” means, with respect to Securities of any series issuable in whole or in part in the form of one or more Global Securities, a clearing agency registered under the Exchange Act that is designated to act as Depository for such Securities as contemplated by Section 3.1.



“Designated Senior Debt” means the Company’s obligations under any particular Senior Debt in which the instrument creating or evidencing the same or the assumption or guarantee thereof (or related agreements or documents to which the Company is a party) expressly provides that such Senior Debt shall be “Designated Senior Debt” for purposes of this Indenture (provided, that such instrument, agreement or other document may place limitations and conditions on the right of such Senior Debt to exercise the rights of Designated Senior Debt). If any payment made to any holder of any Designated Senior Debt or its Representative with respect to such Designated Senior Debt is rescinded or must otherwise be returned by such holder or Representative upon the insolvency, bankruptcy or reorganization of the Company or otherwise, the reinstated Indebtedness of the Company arising as a result of such rescission or return shall constitute Designated Senior Debt effective as of the date of such rescission or return.

“euro” or “euros” means the currency adopted by those nations participating in the third stage of the economic and monetary union provisions of the Treaty on European Union, signed at Maastricht on February 7, 1992.

“European Economic Area” means the member nations of the European Economic Area pursuant to the Oporto Agreement on the European Economic Area dated May 2, 1992, as amended.

“European Union” means the member nations of the European Union established by the Treaty of European Union, signed at Maastricht on February 7, 1992, which amended the Treaty of Rome establishing the European Community.

“Event of Default” has the meaning specified in Section 5.1.

“Exchange Act” means the Securities Exchange Act of 1934 and any statute successor thereto, in each case as amended from time to time.

“Expiration Date” has the meaning specified in Section 1.4.

“Foreign Government Obligation” means with respect to Securities of any series which are not denominated in the currency of the United States of America (x) any security which is (i) a direct obligation of the government which issued or caused to be issued the currency in which such security is denominated and for the payment of which obligations its full faith and credit is pledged or, with respect to Securities of any series which are denominated in euros, a direct obligation of any member nation of the European Union for the payment of which obligation the full faith and credit of the respective nation is pledged so long as such nation has a credit rating at least equal to that of the highest rated member nation of the European Economic Area, or (ii) an obligation of a Person controlled or supervised by and acting as an agency or instrumentality of a government specified in clause (i) above the timely payment of which is unconditionally guaranteed as a full faith and credit obligation by the such government, which, in either case (i) or (ii), is not callable or redeemable at the option of the issuer thereof, and (y) 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 (x) above 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 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 that evidences all or part of the Securities of any series and bears the legend set forth in Section 2.4 (or such legend as may be specified as contemplated by Section 3.1 for such Securities).

“Holder” means a Person in whose name a Security is registered in the Security Register.

“Indebtedness” means, with respect to any Person, and without duplication, whether absolute or contingent, secured or unsecured, due or to become due, (a) all indebtedness, obligations and other liabilities (contingent or otherwise) of such Person evidenced by a credit or loan agreement, note, bond, debenture, or other written obligation (whether or not the recourse of the lender is to the whole of the assets of such Person or to only a portion thereof) or for money borrowed (including obligations of such Person in respect of overdrafts, foreign exchange contracts, currency exchange agreements, interest rate protection agreements, and any loans or advances from banks, whether or not evidenced by notes or similar instruments); (b) all obligations and liabilities (contingent or otherwise) of such Person evidenced by a note or similar instrument given in connection with the acquisition of any businesses, properties or assets of any kind; (c) all obligations and liabilities (contingent or otherwise) in respect of leases of such Person required, in conformity with generally accepted

accounting principles, to be accounted for as capitalized lease obligations on the balance sheet of such Person and all obligations and other liabilities (contingent or otherwise) or as lessee under any leases or related documents for facilities, capital equipment or related assets, whether or not capitalized, entered into or leased for financing purposes; (d) all net obligations of such Person (contingent or otherwise) with respect to interest rate and currency swaps, caps, floors, collars, hedge agreements, forward contracts or similar agreements or arrangements; (e) all obligations and other liabilities (contingent or otherwise) of such Person with respect to letters of credit, bankers' acceptances or similar facilities, including reimbursement obligations with respect to the foregoing; (f) all obligations and liabilities of such Person or assumed as the deferred purchase price of property or services, but excluding trade accounts payable and accrued liabilities arising in the ordinary course of business; (g) all obligations of the type referred to in (a) through (f) above of another Person the payment of which, in either case, such Person has assumed or guaranteed or for which such Person is responsible or liable directly or indirectly, jointly or severally, as obligor, guarantor or otherwise, or which are secured by a lien on such Person's property; and (h) any and all renewals, extensions, modifications, replacements, restatements and refundings of, or, any indebtedness or obligation issued in exchange for, any such indebtedness or obligation of the kind described in clauses (a) through (g) above.

"Indenture" means this instrument as originally executed and as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into pursuant to the applicable provisions hereof, including, for all purposes of this instrument and any such supplemental indenture, the provisions of the Trust Indenture Act that are deemed to be a part of and govern this instrument and any such supplemental indenture, respectively. The term "Indenture" shall also include the terms of particular series of Securities established as contemplated by Section 3.1; provided, however, that if at any time more than one Person is acting as Trustee under this Indenture due to the appointment of one or more separate Trustees for any one or more separate series of Securities, "Indenture" shall mean, with respect to such series of Securities for which any such Person is Trustee, this instrument as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into pursuant to the applicable provisions hereof and shall include the terms of particular series of Securities for which such Person is Trustee established as contemplated by Section 3.1, exclusive, however, of any provisions or terms which relate solely to other series of Securities for which such Person is not Trustee, regardless of when such terms or provisions were adopted, and exclusive of any provisions or terms adopted by means of one or more indentures supplemental hereto executed and delivered after such Person had become such Trustee, but to which such Person, as such Trustee, was not a party; provided, further that in the event that this Indenture is supplemented or amended by one or more indentures supplemental hereto which are only applicable to certain series of Securities, the term "Indenture" for a particular series of Securities shall only include the supplemental indentures applicable thereto.

"interest," when used with respect to an Original Issue Discount Security, which by its terms bears interest only after Maturity, means interest payable after Maturity.

"Interest Payment Date," when used with respect to any Security, means the Stated Maturity of an installment of interest on such Security.

"Investment Company Act" means the Investment Company Act of 1940 and any statute successor thereto, in each case as amended from time to time.

"Maturity," when used with respect to any Security, means the date on which the principal of such Security or an installment of principal becomes due and payable as therein or herein provided, whether at the Stated Maturity or by declaration of acceleration, repurchase at the option of the Holder, upon redemption or otherwise.

"Non-electing Share" has the meaning specified in Section 14.9.

"Non-Payment Default" has the meaning specified in Section 15.2.

"Notice of Default" means a written notice of the kind specified in Section 5.1(4).

"Officers' Certificate" means a certificate signed by the Chairman of the Board, a Vice Chairman of the Board, the Chief Executive Officer, the President or a Vice President, and by the principal financial officer, the Treasurer, an Assistant Treasurer, the Secretary or an Assistant Secretary, of the Company, and delivered to the Trustee. One of the officers signing an Officers' Certificate given pursuant to Section 10.4 shall be the principal executive, financial or accounting officer of the Company.

“Opinion of Counsel” means a written opinion of counsel, who may be counsel for, or an employee of, the Company, and who shall be reasonably acceptable to the Trustee.

“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 5.2.

“Outstanding,” when used with respect to Securities, means, as of the date of determination, all Securities theretofore authenticated and delivered under this Indenture, except

- (1) Securities theretofore canceled by the Trustee or delivered to the Trustee for cancellation;
- (2) Securities for whose payment or redemption money in the necessary amount has been theretofore deposited with the Trustee or any Paying Agent (other than the Company) in trust or set aside and segregated in trust by the Company (if the Company shall act as its own Paying Agent) for the Holders of such Securities; provided that, if such Securities are to be redeemed, notice of such redemption has been duly given pursuant to this Indenture or provision therefor satisfactory to the Trustee has been made;
- (3) Securities as to which Defeasance has been effected pursuant to Section 13.2; and
- (4) Securities which have been paid pursuant to Section 3.6 or in exchange for or in lieu of which other Securities have been authenticated and delivered pursuant to this Indenture, other than any such Securities in respect of which there shall have been presented to the Trustee proof satisfactory to it that such Securities are held by a bona fide purchaser in whose hands such Securities are valid obligations of the Company;

provided, however, that in determining whether the Holders of the requisite principal amount of the Outstanding Securities have given, made or taken any request, demand, authorization, direction, notice, consent, waiver or other action hereunder as of any date, (A) the principal amount of an Original Issue Discount Security which shall be deemed to be Outstanding shall be the amount of the principal thereof which would be due and payable as of such date upon acceleration of the Maturity thereof to such date pursuant to Section 5.2, (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 3.1, (C) the principal amount of a Security denominated in one or more non-U.S. dollar 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 3.1, 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), and (D) Securities owned by the Company or any other obligor upon the Securities shall be disregarded and deemed not to be Outstanding, except that, in determining whether the Trustee shall be protected in relying upon any such request, demand, authorization, direction, notice, consent, waiver or other action, only Securities which the Trustee knows to be 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 Company or any other obligor upon the Securities.

“Paying Agent” means any Person authorized by the Company to pay the principal of or any premium or interest on any Securities on behalf of the Company.

“Payment Blockage Notice” has the meaning specified in Section 15.2.

“Payment Default” has the meaning specified in Section 15.2.

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

“Place of Payment,” when used with respect to the Securities of any series, means the place or places where the principal of and any premium and interest on the Securities of that series are payable as specified as contemplated by Section 3.1.

“Predecessor Security” of any particular Security means every previous Security evidencing all or a portion of the same debt as that evidenced by such particular Security; and, for the purposes of this definition, any Security authenticated

and delivered under Section 3.6 in exchange for or in lieu of a mutilated, destroyed, lost or stolen Security shall be deemed to evidence the same debt as the mutilated, destroyed, lost or stolen Security.

“Record Date” means any Regular Record Date or Special Record Date.

“Redemption Date,” when used with respect to any Security to be redeemed, means the date fixed for such redemption by or pursuant to this Indenture.

“Redemption Price,” when used with respect to any Security to be redeemed, means the price at which it is to be redeemed pursuant to this Indenture.

“Regular Record Date” for the interest payable on any Interest Payment Date on the Securities of any series means the date specified for that purpose as contemplated by Section 3.1.

“Reporting Default” has the meaning specified in Section 5.2(b).

“Representative” means the (a) indenture trustee or other trustee, agent or representative for any Senior Debt or (b) with respect to any Senior Debt that does not have any such trustee, agent or other representative, (i) in the case of such Senior Debt issued pursuant to an agreement providing for voting arrangements as among the holders or owners of such Senior Debt, any holder or owner of such Senior Debt acting with the consent of the required Persons necessary to bind such holders or owners of such Senior Debt and (ii) in the case of all other such Senior Debt, the holder or owner of such Senior Debt.

“Responsible Officer” means, when used with respect to the Trustee, an officer of the Trustee in the Corporate Trust Office assigned and duly authorized by the Trustee to administer its corporate trust matters.

“Securities” has the meaning stated in the first recital of this Indenture and more particularly means any Securities authenticated and delivered under this Indenture.

“Securities Act” means the Securities Act of 1933 and any statute successor thereto, in each case as amended from time to time.

“Security Register” and “Security Registrar” have the respective meanings specified in Section 3.5.

“Senior Debt” means the principal of, premium, if any, interest (including all interest accruing subsequent to the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowable as a claim in any such proceeding) and rent payable on or in connection with, and all fees, costs, expenses and other amounts accrued or due on or in connection with, Indebtedness of the Company, whether outstanding on the date of this Indenture or thereafter created, incurred, assumed, guaranteed or in effect guaranteed by the Company (including all deferrals, renewals, extensions or refundings of, or amendments, modifications or supplements to, the foregoing), unless in the case of any particular Indebtedness the instrument creating or evidencing the same or the assumption or guarantee thereof expressly provides that such Indebtedness shall not be senior in right of payment to the Securities or expressly provides that such Indebtedness is “*pari passu*” or “junior” to the Securities. Notwithstanding the foregoing, the term Senior Debt shall not include any Indebtedness of the Company to any Subsidiary of the Company. If any payment made to any holder of any Senior Debt or its Representative with respect to such Senior Debt is rescinded or must otherwise be returned by such holder or Representative upon the insolvency, bankruptcy or reorganization of the Company or otherwise, the reinstated Indebtedness of the Company arising as a result of such rescission or return shall constitute Senior Debt effective as of the date of such rescission or return.

“Special Record Date” for the payment of any Defaulted Interest means a date fixed by the Trustee pursuant to Section 3.7.

“Stated Maturity,” when used with respect to any Security or any installment of principal thereof or interest thereon, means the date specified in such Security as the fixed date on which the principal of such Security or such installment of principal or interest is due and payable.

“Subsidiary” means a Person of which at least a majority of the outstanding voting stock having the power to elect a

majority of the board of directors of such Person (in the case of a corporation) is, or of which at least a majority of the equity interests (in the case of a Person which is not a corporation) are, at the time owned, directly or indirectly, by the Company or by one or more other Subsidiaries, or by the Company and one or more other Subsidiaries. For the purposes of this definition, “voting stock” means stock or similar interests to the Company which ordinarily has or have voting power for the election of directors or persons performing similar functions, whether at all times or only so long as no senior class of stock or other interests has or have such voting power by reason of any contingency.

“Trust Indenture Act” means the Trust Indenture Act of 1939 as in force at the date as of which this instrument was executed; provided, however, that in the event the Trust Indenture Act of 1939 is amended after such date, “Trust Indenture Act” means, to the extent required by any such amendment, the Trust Indenture Act of 1939 as so amended.

“Trustee” means the Person named as the “Trustee” in the first paragraph of this instrument until a successor Trustee shall have become such pursuant to the applicable provisions of this Indenture, and thereafter “Trustee” shall mean or include each Person who is then a Trustee hereunder, and if at any time there is more than one such Person, “Trustee” as used with respect to the Securities of any series shall mean the Trustee with respect to Securities of that series.

“U.S. Government Obligation” means (x) any security which is (i) a direct obligation of the United States of America for the payment of which the full faith and credit of the United States of America is pledged or (ii) 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, which, in either case (i) or (ii), is not callable or redeemable at the option of the issuer thereof, and (y) any depositary receipt issued by a bank (as defined in Section 3(a)(2) of the Securities Act) as custodian with respect to any U.S. Government Obligation which is specified in clause (x) above and held by such bank for the account of the holder of such depositary receipt, or with respect to any specific payment of principal or interest on any U.S. 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 U.S. Government Obligation or the specific payment of principal or interest evidenced by such depositary receipt.

“Vice President,” when used with respect to the Company 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 “vice president.”

## **Section 1.2 Compliance Certificates and Opinions.**

Upon any application or request by the Company to the Trustee to take any action under any provision of this Indenture, the Company shall furnish to the Trustee such certificates and opinions as may be required under the Trust Indenture Act. Each such certificate or opinion shall be given in the form of an Officers’ Certificate, if to be given by an officer of the Company, or an Opinion of Counsel, if to be given by counsel, and shall comply with the requirements of the Trust Indenture Act and any other requirements set forth in this Indenture.

Every certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture shall include,

- (1) a statement that each individual signing such certificate or opinion has read such covenant or condition and the definitions herein relating thereto;
- (2) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;
- (3) a statement that, in the opinion of each such individual, such individual has made such examination or investigation as is necessary to enable such individual to express an informed opinion as to whether or not such covenant or condition has been complied with; and
- (4) a statement as to whether, in the opinion of each such individual, such condition or covenant has been complied with.

### **Section 1.3 Form of Documents Delivered to Trustee.**

In any case where several matters are required to be certified by, or covered by an opinion of, any specified Person, it is not necessary that all such matters be certified by, or covered by the opinion of, only one such Person, or that they be so certified or covered by only one document, but one such Person may certify or give an opinion with respect to some matters and one or more other such Persons as to other matters, and any such Person may certify or give an opinion as to such matters in one or several documents.

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

Where any Person is required to make, give or execute two or more applications, requests, consents, certificates, statements, opinions or other instruments under this Indenture, they may, but need not, be consolidated and form one instrument.

### **Section 1.4 Acts of Holders; Record Dates.**

Any request, demand, authorization, direction, notice, consent, waiver or other action provided or permitted by this Indenture to be given, made or taken by Holders may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such Holders 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 and, where it is hereby expressly required, to the Company. The Trustee shall promptly deliver to the Company copies of all such instrument or instruments delivered to the Trustee. Such instrument or instruments (and the action embodied therein and evidenced thereby) are herein sometimes referred to as the "Act" of the Holders signing such instrument or instruments. Proof of execution of any such instrument or of a writing appointing any such agent shall be sufficient for any purpose of this Indenture and (subject to Section 6.1) conclusive in favor of the Trustee and the Company, if made in the manner provided in this Section.

The fact and date of the execution by any Person of any such instrument or writing may be proved by the affidavit of a witness of such execution or by a certificate of a notary public or other officer authorized by law to take acknowledgments of deeds, certifying that the individual signing such instrument or writing acknowledged to such witness, notary public or other officer the execution thereof. Where such execution is by a signer acting in a capacity other than such signor's individual capacity, such certificate or affidavit shall also constitute sufficient proof of such signor's authority. The fact and date of the execution of any such instrument or writing, or the authority of the Person executing the same, may also be proved in any other manner that the Trustee deems sufficient.

The ownership of Securities shall be proved by the Security Register.

Any request, demand, authorization, direction, notice, consent, waiver or other Act of the Holder of any Security shall bind every future Holder of the same Security and the Holder of every Security issued upon the registration of transfer thereof or in exchange therefor or in lieu thereof in respect of anything done, omitted or suffered to be done by the Trustee or the Company in reliance thereon, whether or not notation of such action is made upon such Security.

The Company may set any day as a record date for the purpose of determining the Holders of Outstanding Securities of any series entitled to give, make or take any request, demand, authorization, direction, vote, notice, consent, waiver or other action provided or permitted by this Indenture to be given, made or taken by Holders of Securities of such series, provided that the Company may not set a record date for, and the provisions of this paragraph shall not apply with respect to, the giving or making of any notice, declaration, request or direction referred to in the next paragraph. If any record date is set pursuant to this paragraph, the Holders of Outstanding Securities of the relevant series on such record date, and no other Holders, shall be entitled to take the relevant action, whether or not such Holders remain Holders after such record date; provided that no such action shall be effective hereunder unless taken on or prior to the applicable Expiration Date by

Holders of the requisite principal amount of Outstanding Securities of such series on such record date. Nothing in this paragraph shall be construed to prevent the Company from setting a new record date for any action for which a record date has previously been set pursuant to this paragraph (whereupon the record date previously set shall automatically and with no action by any Person be canceled and of no effect), and nothing in this paragraph shall be construed to render ineffective any action taken by Holders of the requisite principal amount of Outstanding Securities of the relevant series on the date such action is taken. Promptly after any record date is set pursuant to this paragraph, the Company, at its own expense, shall cause notice of such record date, the proposed action by Holders and the applicable Expiration Date to be given to the Trustee in writing and to each Holder of Securities of the relevant series in the manner set forth in Section 1.6.

The Trustee may set any day as a record date for the purpose of determining the Holders of Outstanding Securities of any series entitled to join in the giving or making of (i) any Notice of Default, (ii) any declaration of acceleration referred to in Section 5.2, (iii) any request to institute proceedings referred to in Section 5.7(2) or (iv) any direction referred to in Section 5.12, in each case with respect to Securities of such series. If any record date is set pursuant to this paragraph, the Holders of Outstanding Securities of such series on such record date, and no other Holders, shall be entitled to join in such notice, declaration, request or direction, whether or not such Holders remain Holders after such record date; provided that no such action shall be effective hereunder unless taken on or prior to the applicable Expiration Date by Holders of the requisite principal amount of Outstanding Securities of such series on such record date. Nothing in this paragraph shall be construed to prevent the Trustee from setting a new record date for any action for which a record date has previously been set pursuant to this paragraph (whereupon the record date previously set shall automatically and with no action by any Person be canceled and of no effect), and nothing in this paragraph shall be construed to render ineffective any action taken by Holders of the requisite principal amount of Outstanding Securities of the relevant series on the date such action is taken. Promptly after any record date is set pursuant to this paragraph, the Trustee, at the Company's expense, shall cause notice of such record date, the proposed action by Holders and the applicable Expiration Date to be given to the Company in writing and to each Holder of Securities of the relevant series in the manner set forth in Section 1.6.

With respect to any record date set pursuant to this Section, the party hereto which sets such record dates may designate any day as the "Expiration Date" and from time to time may change the Expiration Date to any earlier or later day; provided that no such change shall be effective unless notice of the proposed new Expiration Date is given to the other party hereto in writing, and to each Holder of Securities of the relevant series in the manner set forth in Section 1.6, on or prior to the existing Expiration Date. If an Expiration Date is not designated with respect to any record date set pursuant to this Section, the party hereto which set such record date shall be deemed to have initially designated the 180th day after such record date as the Expiration Date with respect thereto, subject to its right to change the Expiration Date as provided in this paragraph. Notwithstanding the foregoing, no Expiration Date shall be later than the 180th day after the applicable record date.

Without limiting the foregoing, a Holder entitled hereunder to take any action hereunder with regard to any particular Security may do so with regard to all or any part of the principal amount of such Security or by one or more duly appointed agents each of which may do so pursuant to such appointment with regard to all or any part of such principal amount.

#### **Section 1.5 Notices, etc., to Trustee and Company.**

Any request, demand, authorization, direction, notice, consent, waiver or Act of Holders or other document provided or permitted by this Indenture to be made upon, given or furnished to, or filed with, (1) the Trustee by any Holder or by the Company shall be sufficient for every purpose hereunder if made, given, furnished or filed in writing (or by facsimile transmissions, provided that oral confirmation of receipt shall have been received) to or with the Trustee at its Corporate Trust Office, Attention: Corporate Trust Department, or (2) the Company by the Trustee or by any Holder shall be sufficient for every purpose hereunder (unless otherwise herein expressly provided) if in writing and mailed, first-class postage prepaid, personally delivered or sent via overnight courier to the Company addressed to it at the address of its principal office specified in the first paragraph of this instrument or at any other address previously furnished in writing to the Trustee by the Company, Attention: Chief Financial Officer.

#### **Section 1.6 Notice to Holders; Waiver.**

Where this Indenture provides for notice to Holders of any event, such notice shall be sufficiently given (unless otherwise herein expressly provided) if in writing and mailed, first-class postage prepaid, or delivered by hand or overnight courier, to each Holder affected by such event, at its address as it appears in the Security Register, 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 mail or deliver by hand or overnight courier any notice, nor any defect in any notice so mailed or delivered by hand or overnight courier, to any particular Holder shall affect the sufficiency of such notice with respect to other Holders. Where this Indenture provides for notice in any manner, such notice may be waived in writing by the Person entitled to receive such notice, either before or after the event, and such waiver shall be the equivalent of such notice. Waivers of notice by Holders shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

In case by reason of the suspension of regular mail service or by reason of any other cause it shall be impracticable to give such notice by mail, then such notification as shall be made with the approval of the Trustee shall constitute a sufficient notification for every purpose hereunder.

#### **Section 1.7 Conflict with Trust Indenture Act.**

If any provision hereof limits, qualifies or conflicts with a provision of the Trust Indenture Act that is required under the Trust Indenture Act to be a part of and govern this Indenture, the latter provision shall control. If any provision of this Indenture modifies or excludes any provision of the Trust Indenture Act, which may be so modified or excluded, the latter provision shall be deemed to apply to this Indenture as so modified or to be excluded, as the case may be.

#### **Section 1.8 Effect of Headings and Table of Contents.**

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

#### **Section 1.9 Successors and Assigns.**

All covenants and agreements in this Indenture by the Company shall bind its successors and assigns, whether so expressed or not.

#### **Section 1.10 Separability Clause.**

In case any provision in this Indenture or in the Securities shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

#### **Section 1.11 Benefits of Indenture.**

Nothing in this Indenture or in the Securities, express or implied, shall give to any Person, other than the parties hereto and their successors hereunder, the holders of Senior Debt and the Holders (in the case of Article 15 hereof), any benefit or any legal or equitable right, remedy or claim under this Indenture.

#### **Section 1.12 Governing Law.**

**THIS INDENTURE AND THE SECURITIES SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.**

#### **Section 1.13 Legal Holidays.**

In any case where any Interest Payment Date, Redemption Date or Stated Maturity of any Security or the last date on which a Holder has the right to convert a Security at a particular conversion price or conversion rate, as the case may be, shall not be a Business Day at any Place of Payment, then (notwithstanding any other provision of this Indenture or of the Securities (other than a provision of any Security which specifically states that such provision shall apply in lieu of this Section)) payment of interest or principal (and premium, if any) or, if applicable to a particular series of Securities, conversion need not be made at such Place of Payment on such date, but may be made on the next succeeding Business Day at such Place of Payment with the same force and effect as if made on the Interest Payment Date or Redemption Date, at the Stated Maturity or on such last day for conversion, as the case may be.



#### **Section 1.14 Indenture and Securities Solely Corporate Obligations.**

No recourse for the payment of the principal of or premium, if any, or interest on any Security, or for any claim based thereon or otherwise in respect thereof, and no recourse under or upon any obligation, covenant or agreement of the Company in this Indenture or in any supplemental indenture or in any Security, or because of the creation of any indebtedness represented thereby, shall be had against any incorporator, stockholder, employee, agent, officer, or director or subsidiary, as such, past, present or future, of the Company or of any successor corporation, either directly or through the Company or any 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 all such liability is hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issue of the Securities.

#### **Section 1.15 Indenture May be Executed in Counterparts.**

This instrument 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.

### **ARTICLE 2**

#### **SECURITY FORMS**

##### **Section 2.1 Forms Generally.**

The Securities of each series shall be in substantially the form set forth in this Article, or in such other form as shall be established by or pursuant to a Board Resolution 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 such letters, numbers or other marks of identification and such legends or endorsements placed thereon as may be required to comply with the rules of any securities exchange or Depository therefor or as may, consistently herewith, be determined by the officers executing such Securities, as evidenced by their execution thereof. If the form of Securities of any series is established by action taken pursuant to a Board Resolution, a copy of an appropriate record of such action shall be certified by the Secretary or an Assistant Secretary of the Company and delivered to the Trustee at or prior to the delivery of the Company Order contemplated by Section 3.3 for the authentication and delivery of such Securities. Any such Board Resolution or record of such action shall have attached thereto a true and correct copy of the form of Security referred to therein approved by or pursuant to such Board Resolution.

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 2.2 Form of Face of Security.**

**[INSERT ANY LEGEND REQUIRED BY THE INTERNAL REVENUE CODE AND THE REGULATIONS THEREUNDER.]**

**CASSAVA SCIENCES, INC.**

NO. \_\_\_\_\_

\$ \_\_\_\_\_  
CUSIP: \_\_\_\_\_

Cassava Sciences, Inc., a corporation duly organized and existing under the laws of Delaware (herein called the "Company," which term includes any successor Person under the Indenture hereinafter referred to), for value received, hereby promises to pay to , or registered assigns, the principal sum of dollars on **[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, semi-annually on and in each year, commencing , at the rate of % per annum, until the principal hereof is paid or made available for payment **[if applicable, insert —** , provided that any principal and premium, and any such installment of interest, which is overdue shall bear interest at the rate of % per annum (to the extent that the payment of such interest shall be legally enforceable), from the dates such amounts are due until they are paid or made available for payment, and such interest shall be payable on demand]. The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in such Indenture, be paid to the Person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on the Regular 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. Any such interest not so punctually paid or duly provided for will forthwith cease to be payable to the Holder on such Regular Record Date and may either be paid to the Person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on a Special Record Date for the payment of such Defaulted Interest to be fixed by the Trustee, notice whereof shall be given to Holders of Securities of this series not less than 10 days prior to such Special Record Date, or be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Securities of this series may be listed, and upon such notice as may be required by such exchange, all as more fully provided in said Indenture].

**[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 Stated Maturity and in such case the overdue principal and any overdue premium shall bear interest at the rate of % per annum (to the extent that the payment of such interest shall be legally enforceable), from the dates such amounts are due until they are paid or made available for payment. Interest on any overdue principal or premium shall be payable on demand. Any such interest on overdue principal or premium which is not paid on demand shall bear interest at the rate of % per annum (to the extent that the payment of such interest on interest shall be legally enforceable), from the date of such demand until the amount so demanded is paid or made available for payment. Interest on any overdue interest shall be payable on demand.] Payment of the principal of (and premium, if any) and **[if applicable, insert —** any such] interest on this Security will be made at the office or agency of the Company maintained for that purpose in , in such coin or currency of the United States of America as at the time of payment is legal tender for payment of public and private debts **[if applicable, insert —**; provided, however, that at the option of the Company payment of interest may be made by check mailed to the address of the Person entitled thereto as such address shall appear in the Security Register].

Reference is hereby made to the further provisions of this Security set forth on the reverse hereof, which further provisions shall for all purposes have the same effect as if set forth at this place.

Unless the certificate of authentication hereon has been executed by the Trustee referred to on the reverse hereof by manual signature, this Security shall not be entitled to any benefit under the Indenture or be valid or obligatory for any purpose.

IN WITNESS WHEREOF, the Company has caused this instrument to be duly executed.

Dated: \_\_\_\_\_

CASSAVA SCIENCES, INC.

By: \_\_\_\_\_

Title: \_\_\_\_\_

ATTEST:

\_\_\_\_\_

## Section 2.3 Form of Reverse of Security.

This Security is one of a duly authorized issue of securities of the Company (herein called the “Securities”), issued and to be issued in one or more series under an Indenture, dated as of , 200 (herein called the “Indenture,” which term shall have the meaning assigned to it in such instrument), between the Company and , as Trustee (herein called the “Trustee,” which term includes any successor trustee under the Indenture), and reference is hereby made to the Indenture and all indentures supplemental thereto for a statement of the respective rights, limitations of rights, duties and immunities thereunder of the Company, the Trustee, the holders of Senior Debt and the Holders of the Securities and of the terms upon which the Securities are, and are to be, authenticated and delivered. This Security is one of the series designated on the face hereof **[if applicable, insert —** , limited in aggregate principal amount to \$ ].

**[If applicable, insert —** The Securities of this series are subject to redemption upon not less than **[if applicable, insert — 30]** days’ notice by mail, **[if applicable, insert —** (1) on in any year commencing with the year and ending with the year through operation of the sinking fund for this series at a Redemption Price equal to 100% of the principal amount, and (2)] at any time **[if applicable, insert —** on or after , 20 ], as a whole or in part, at the election of the Company, at the following Redemption Prices (expressed as percentages of the principal amount): If redeemed **[if applicable, insert —** on or before , %, and if redeemed] during the 12-month period beginning of the years indicated,

Year	Redemption Price	Year	Redemption Price

and thereafter at a Redemption Price equal to % of the principal amount, together in the case of any such redemption **[if applicable, insert —** (whether through operation of the sinking fund or otherwise)] with accrued interest to the Redemption Date, but interest installments whose Stated Maturity is on or prior to such Redemption Date will be payable to the Holders of such Securities, or one or more Predecessor Securities, of record at the close of business on the relevant Record Dates referred to on the face hereof, all as provided in the Indenture.]

**[If applicable, insert —** The Securities of this series are subject to redemption upon not less than **[if applicable, insert — 30]** days’ notice by mail, (1) on in any year commencing with the year and ending with the year through operation of the sinking fund for this series at the Redemption Prices for redemption through operation of the sinking fund (expressed as percentages of the principal amount) set forth in the table below, and (2) at any time **[if applicable, insert —** on or after ], as a whole or in part, at the election of the Company, at the Redemption Prices for redemption otherwise than through operation of the sinking fund (expressed as percentages of the principal amount) set forth in the table below: If redeemed during the 12-month period beginning of the years indicated,

Year	Redemption Price For Redemption Through Operation of the Sinking Fund	Year	Redemption Price For Redemption Otherwise Than Through Operation of the Sinking Fund

and thereafter at a Redemption Price equal to % of the principal amount, together in the case of any such redemption (whether through operation of the sinking fund or otherwise) with accrued interest to the Redemption Date, but interest installments whose Stated Maturity is on or prior to such Redemption Date will be payable to the Holders of such Securities, or one or more Predecessor Securities, of record at the close of business on the relevant Record Dates referred to on the face hereof, all as provided in the Indenture.]

**[If applicable, insert —** Notwithstanding the foregoing, the Company may not, prior to , redeem any Securities of this series as contemplated by **[if applicable, insert —** clause (2) of] the preceding paragraph as a part of, or in anticipation of, any refunding operation by the application, directly or indirectly, of moneys borrowed having an interest cost to the Company (calculated in accordance with generally accepted financial practice) of less than % per annum.]

[If applicable, insert — The sinking fund for this series provides for the redemption on , in each year beginning with the year and ending with the year of [if applicable, insert — not less than \$ (“mandatory sinking fund”) and not more than] \$ aggregate principal amount of Securities of this series. Securities of this series acquired or redeemed by the Company otherwise than through [if applicable, insert — mandatory] sinking fund payments may be credited against subsequent [if applicable, insert — mandatory] sinking fund payments otherwise required to be made [if applicable, insert —, in the inverse order in which they become due].]

[If the Security is subject to redemption of any kind, insert — In the event of redemption of this Security in part only, a new Security or Securities of this series and of like tenor for the unredeemed portion hereof will be issued in the name of the Holder hereof upon the cancellation hereof.]

[If applicable, insert — The Indenture contains provisions for defeasance at any time of [the entire indebtedness of this Security] [or] [certain restrictive covenants and Events of Default with respect to this Security] [, in each case] upon compliance with certain conditions set forth in the Indenture.]

[If the Security is convertible into other securities of the Company, specify the conversion features.] The indebtedness evidenced by this Security is, to the extent and in the manner provided in the Indenture, subordinate and subject in right of payment to the prior payment in full of all Senior Debt of the Company, and this Security is issued subject to such provisions of the Indenture with respect thereto. Each Holder of this Security, by accepting the same, (a) agrees to and shall be bound by such provisions, (b) authorizes and directs the Trustee on such Holder’s behalf to take such action as may be necessary or appropriate to effectuate the subordination so provided and (c) appoints the Trustee such Holder’s attorney-in-fact for any and all such purposes.

[If the Security is not an Original Issue Discount Security, insert — If an Event of Default with respect to Securities of this series shall occur and be continuing, the principal of the Securities of this series may be declared due and payable in the manner and with the effect provided in the Indenture.]

[If the Security is an Original Issue Discount Security, insert — If an Event of Default with respect to Securities of this series shall occur and be continuing, an amount of principal of the Securities of this series may be declared due and payable in the manner and with the effect provided in the Indenture. Such amount shall be equal to — insert formula for determining the amount. Upon payment (i) of the amount of principal so declared due and payable and (ii) of interest on any overdue principal, premium and interest (in each case to the extent that the payment of such interest shall be legally enforceable), all of the Company’s obligations in respect of the payment of the principal of and premium and interest, if any, on the Securities of this series shall terminate.]

The Indenture permits, with certain exceptions as therein provided, the amendment thereof and the modification of the rights and obligations of the Company and the rights of the Holders of the Securities of each series to be affected under the Indenture at any time by the Company and the Trustee with the consent of the Holders of more than 50% in principal amount of the Securities at the time Outstanding of each series to be affected. The Indenture also contains provisions permitting the Holders of specified percentages in principal amount of the Securities of each series at the time Outstanding, on behalf of the Holders of all Securities of such series, to waive compliance by the Company with certain provisions of the Indenture and certain past defaults under the Indenture and their consequences. Any such consent or waiver by the Holder of this Security shall be conclusive and binding upon such Holder and upon all future Holders of this Security and of any Security issued upon the registration of transfer hereof or in exchange herefor or in lieu hereof, whether or not notation of such consent or waiver is made upon this Security.

As provided in and subject to the provisions of the Indenture, the Holder of this Security shall not have the right to institute any proceeding with respect to the Indenture or for the appointment of a receiver or trustee or for any other remedy thereunder, unless such Holder shall have previously given the Trustee written notice of a continuing Event of Default with respect to the Securities of this series, the Holders of not less than a majority in principal amount of the Securities of this series at the time Outstanding shall have made written request to the Trustee to institute proceedings in respect of such Event of Default as Trustee and offered the Trustee reasonable indemnity, and the Trustee shall not have received from the Holders of a majority in principal amount of Securities of this series at the time Outstanding a direction inconsistent with such request, and shall have failed to institute any such proceeding, for 60 days after receipt of such notice, request and offer of indemnity. The foregoing shall not apply to any suit instituted by the Holder of this Security for the enforcement of any payment of principal hereof or any premium or interest hereon on or after the respective due dates expressed herein.

No reference herein to the Indenture and no provision of this Security or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of and any premium and interest on this Security at the times, place and rate, and in the coin or currency, herein prescribed.

As provided in the Indenture and subject to certain limitations therein set forth, the transfer of this Security is registrable in the Security Register, upon surrender of this Security for registration of transfer at the office or agency of the Company in any place where the principal of and any premium and interest on this Security are payable, duly endorsed by, or accompanied by a written instrument of transfer in form satisfactory to the Company and the Security Registrar duly executed by, the Holder hereof or its attorney duly authorized in writing, and thereupon one or more new Securities of this series and of like tenor, of authorized denominations and for the same aggregate principal amount, will be issued to the designated transferee or transferees.

The Securities of this series are issuable only in registered form without coupons in denominations of \$ and any integral multiple thereof. As provided in the Indenture and subject to certain limitations therein set forth, Securities of this series are exchangeable for a like aggregate principal amount of Securities of this series and of like tenor of a different authorized denomination, as requested by the Holder surrendering the same.

No service charge shall be made for any such registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.

Prior to due presentment of this Security for registration of transfer, the Company, the Trustee and any agent of the Company or the Trustee may treat the Person in whose name this Security is registered as the owner hereof for all purposes, whether or not this Security be overdue, and neither the Company, the Trustee nor any such agent shall be affected by notice to the contrary.

All terms used in this Security that are defined in the Indenture shall have the meanings assigned to them in the Indenture.

#### **Section 2.4 Form of Legend for Global Securities.**

Unless otherwise specified as contemplated by Section 3.1 for the Securities evidenced thereby, every Global Security authenticated and delivered hereunder shall bear a legend in substantially the following form:

**THIS SECURITY IS A GLOBAL SECURITY WITHIN THE MEANING OF THE INDENTURE  
HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF A DEPOSITARY OR A NOMINEE  
THEREOF. THIS SECURITY MAY NOT BE EXCHANGED IN WHOLE OR IN PART FOR A SECURITY  
REGISTERED, AND NO TRANSFER OF THIS SECURITY IN WHOLE OR IN PART MAY BE REGISTERED, IN  
THE NAME OF ANY PERSON OTHER THAN SUCH DEPOSITARY OR A NOMINEE THEREOF, EXCEPT IN  
THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE.**

#### **Section 2.5 Form of Trustee's Certificate of Authentication.**

The Trustee's certificates of authentication shall be in substantially the following form:

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

\_\_\_\_\_,  
as Trustee

By: \_\_\_\_\_  
Authorized Officer

**Section 2.6 Form of Conversion Notice.**

Conversion notices shall be in substantially the following form:

To Cassava Sciences, Inc.:

The undersigned owner of this Security hereby irrevocably exercises the option to convert this Security, or portion hereof (which is \$1,000 or an integral multiple thereof) below designated, into shares of Common Stock of the Company in accordance with the terms of the Indenture referred to in this Security, and directs that the shares issuable and deliverable upon the conversion, together with any check in payment for fractional shares and any Securities representing any unconverted principal amount hereof, be issued and delivered to the registered holder hereof unless a different name has been indicated below. If this Notice is being delivered on a date after the close of business on a Regular Record Date and prior to the opening of business on the related Interest Payment Date (unless this Security or the portion thereof being converted has been called for redemption on a Redemption Date during the period beginning at the close of business on a Regular Record Date and ending at the opening of business on the first Business Day after the next succeeding Interest Payment Date, or if such Interest Payment Date is not a Business Day, the second such Business Day), this Notice is accompanied by payment, in funds acceptable to the Company, of an amount equal to the interest payable on such Interest Payment Date of the principal of this Security to be converted. If shares are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect hereto. Any amount required to be paid by the undersigned on account of interest accompanies this Security.

Principal Amount to be Converted  
(in an integral multiple of \$1,000, if less than all)

U.S. \$\_\_\_\_\_

Dated: \_\_\_\_\_

Signature(s) must be guaranteed by an eligible guarantor institution (banks, stock brokers, savings and loan associations and credit unions with membership in an approved signature guarantee medallion program) pursuant to Securities and Exchange Commission Rule 17Ad-15.

\_\_\_\_\_  
Signature Guaranty

Fill in for registration of shares of Common Stock and Security if to be issued otherwise than to the registered Holder.

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
Social Security or Other Taxpayer Identification  
Number

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
Please print Name and Address  
(including zip code)

[The above conversion notice is to be modified, as appropriate, for conversion into other securities or property of the Company.]

## THE SECURITIES

**Section 3.1 Amount Unlimited; Issuable in Series.**

The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more series. There shall be established in or pursuant to a Board Resolution and, subject to Section 3.3, set forth, or determined in the manner provided, in an Officers' Certificate, or established in one or more indentures supplemental hereto, prior to the issuance of Securities of any series,

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

(2) any limit upon the aggregate principal amount of the Securities of the series which may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the series pursuant to Section 3.4, 3.5, 3.6, 9.6 or 11.7 and except for any Securities which, pursuant to Section 3.3, are deemed never to have been authenticated and delivered hereunder);

(3) the Person to whom any interest on a Security of the series shall be payable, if other than the Person in whose name that Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest;

(4) the date or dates on which the principal of any Securities of the series is payable;

(5) the rate or rates (which may be fixed or variable) at which any Securities of the series shall bear interest, if any, the date or dates from which any such interest shall accrue, the Interest Payment Dates on which any such interest shall be payable and the Regular Record Date for any such interest payable on any Interest Payment Date (or the method for determining the dates and rates);

(6) the place or places where the principal of and any premium and interest on any Securities of the series shall be payable;

(7) the period or periods within which, the price or prices at which and the terms and conditions upon which any Securities of the series may be redeemed, in whole or in part, at the option of the Company and, if other than by a Board Resolution, the manner in which any election by the Company to redeem the Securities shall be evidenced;

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

(9) if other than denominations of \$1,000 and any integral multiple thereof, the denominations in which any Securities of the series shall be issuable;

(10) if the amount of principal of or any premium or interest on any Securities of the series may be determined with reference to an index or pursuant to a formula, the manner in which such amounts shall be determined;

(11) if other than the currency of the United States of America, the currency, currencies or currency units in which the principal of or any premium or interest on any Securities of the series shall be payable and the manner of determining the equivalent thereof in the currency of the United States of America for any purpose, including for purposes of the definition of "Outstanding" in Section 1.1;

(12) if the principal of or any premium or interest on any Securities of the series is to be payable, at the

election of the Company or the Holder thereof, in one or more currencies or currency units other than that or those in which such Securities are stated to be payable, the currency, currencies or currency units in which the principal of or any premium or interest on such Securities as to which such election is made shall be payable, the periods within which and the terms and conditions upon which such election is to be made and the amount so payable (or the manner in which such amount shall be determined);

(13) if other than the entire principal amount thereof, the portion of the principal amount of any Securities of the series which shall be payable upon declaration of acceleration of the Maturity thereof pursuant to Section 5.2;

(14) if the principal amount payable at the Stated Maturity of any Securities of the series will not be determinable as of any one or more dates prior to the Stated Maturity, the amount which shall be deemed to be the principal amount of such Securities as of any such date for any purpose thereunder or hereunder, including the principal amount thereof which shall be due and payable upon any Maturity other than the Stated Maturity or which shall be deemed to be Outstanding as of any date prior to the Stated Maturity (or, in any such case, the manner in which such amount deemed to be the principal amount shall be determined);

(15) if applicable, that the Securities of the series, in whole or any specified part, shall be defeasible pursuant to Section 13.2 or Section 13.3 or both such Sections, or any other defeasance provisions applicable to any Securities of the series, and, if other than by a Board Resolution, the manner in which any election by the Company to defease such Securities shall be evidenced;

(16) if applicable, the terms of any right to convert or exchange Securities of the series into shares of Common Stock of the Company or other securities or property;

(17) if applicable, that any Securities of the series shall be issuable in whole or in part in the form of one or more Global Securities and, in such case, the respective Depositaries for such Global Securities, the form of any legend or legends which shall be borne by any such Global Security in addition to or in lieu of that set forth in Section 2.4 and any circumstances in addition to or in lieu of those set forth in Form of clause (2) of the last paragraph of Section 3.5 in which any such Global Security may be exchanged in whole or in part for Securities registered, and any transfer of such Global Security in whole or in part may be registered, in the name or names of Persons other than the Depositary for such Global Security or a nominee thereof;

(18) any addition to or change in the Events of Default which applies to any Securities of the series and any change in the right of the Trustee or the requisite Holders of such Securities to declare the principal amount thereof due and payable pursuant to Section 5.2;

(19) any addition to or change in the covenants set forth in Article 10 which applies to Securities of the series;

(20) any Authenticating Agents, Paying Agents, Security Registrars or such other agents necessary in connection with the issuance of the Securities of such series, including, without limitation, exchange rate agents and calculation agents;

(21) if applicable, the terms of any security that will be provided for a series of Securities, including provisions regarding the circumstances under which collateral may be released or substituted;

(22) if applicable, the terms of any guaranties for the Securities and any circumstances under which there may be additional obligors on the Securities;

(23) any addition to or change in or modification to the subordinated provisions of this Indenture relating to the Securities of that series (including the provisions of Article 15), or different subordination provisions, including a different definition of "Senior Debt" or "Designated Senior Debt," will apply to Securities of the series; and

(24) any other terms of the series (which terms shall not be inconsistent with the provisions of this Indenture, except as permitted by Section 9.1(5)).



All Securities of any one series shall be substantially identical except as to denomination and except as may otherwise be provided in or pursuant to the Board Resolution referred to above and (subject to Section 3.3) set forth, or determined in the manner provided, in the Officers' Certificate referred to above or in any such indenture supplemental hereto.

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

The Securities shall be subordinated in right of payment to Senior Debt as provided in Article 15.

### **Section 3.2 Denominations.**

The Securities of each series shall be issuable only in registered form without coupons and only in such denominations as shall be specified as contemplated by Section 3.1. In the absence of any such specified denomination with respect to the Securities of any series, the Securities of such series shall be issuable in denominations of \$1,000 and any integral multiple thereof.

### **Section 3.3 Execution, Authentication, Delivery and Dating.**

The Securities shall be executed on behalf of the Company by its Chairman of the Board, its Vice Chairman of the Board, its Chief Executive Officer, its principal financial officer, its President or one of its Vice Presidents, attested by its Treasurer, its Secretary or one of its Assistant Treasurers or Assistant Secretaries. The signature of any of these officers on the Securities may be manual or facsimile.

Securities bearing the manual or facsimile signatures of individuals who were at any time the proper officers of the Company shall bind the Company, notwithstanding that such individuals or any of them have ceased to hold such offices prior to the authentication and delivery of such Securities or did not hold such offices at the date of such Securities.

At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Securities of any series executed by the Company to the Trustee for authentication, together with a Company Order for the authentication and delivery of such Securities, and the Trustee in accordance with the Company Order shall authenticate and deliver such Securities. If the form or terms of the Securities of the series have been established by or pursuant to one or more Board Resolutions as permitted by Sections 2.1 and 3.1, 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 6.1) shall be fully protected in relying upon, a copy of such Board Resolution, the Officers' Certificate setting forth the terms of the series and an Opinion of Counsel, with such Opinion of Counsel stating,

(1) if the form of such Securities has been established by or pursuant to Board Resolution as permitted by Section 2.1, that such form has been established in conformity with the provisions of this Indenture;

(2) if the terms of such Securities have been established by or pursuant to Board Resolution as permitted by Section 3.1, that such terms have been established in conformity with the provisions of this Indenture; and

(3) that such Securities, when authenticated and delivered by the Trustee and issued by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will constitute valid and legally binding obligations of the Company enforceable in accordance with their terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and to general equity principles.

If such form or terms have been so established, the Trustee shall not be required to authenticate such Securities if the issue of such Securities pursuant to this Indenture will affect the Trustee's own rights, duties or immunities under the Securities and this Indenture or otherwise in a manner which is not reasonably acceptable to the Trustee.

Notwithstanding the provisions of Section 3.1 and of the preceding paragraph, if all Securities of a series are not to be originally issued at one time, it shall not be necessary to deliver the Officers' Certificate otherwise required pursuant to

Section 3.1 or the Company Order and Opinion of Counsel otherwise required pursuant to such preceding paragraph at or prior to the authentication of each Security of such series if such documents are delivered at or prior to the authentication upon original issuance of the first Security of such series to be issued.

Each Security shall be dated the date of its authentication.

No Security shall be entitled to any benefit under this Indenture or be valid or obligatory for any purpose unless there appears on such Security a certificate of authentication substantially in the form provided for herein executed by the Trustee by manual signature, and such certificate upon any Security shall be conclusive evidence, and the only evidence, that such Security has been duly authenticated and delivered hereunder. Notwithstanding the foregoing, if any Security shall have been authenticated and delivered hereunder but never issued and sold by the Company, and the Company shall deliver such Security to the Trustee for cancellation as provided in Section 3.9, for all purposes of this Indenture such Security shall be deemed never to have been authenticated and delivered hereunder and shall never be entitled to the benefits of this Indenture.

Neither the Company nor the Trustee shall have any responsibility for any defect in the CUSIP number that appears on any Security, check, advice of payment or redemption notice, and any such document may contain a statement to the effect that CUSIP numbers have been assigned by an independent service for convenience of reference and that neither the Company nor the Trustee shall be liable for any inaccuracy in such numbers.

### **Section 3.4 Temporary Securities.**

Pending the preparation of definitive Securities of any series, the Company may execute, and upon Company Order the Trustee shall authenticate and deliver, temporary Securities which are printed, lithographed, typewritten, mimeographed or otherwise produced, in any authorized denomination, substantially of the tenor of the definitive Securities in lieu of which they are issued and with such appropriate insertions, omissions, substitutions and other variations as the officers executing such Securities may determine, as evidenced by their execution of such Securities.

If temporary Securities of any series are issued, the Company will cause definitive Securities of that series to be prepared without unreasonable delay. After the preparation of definitive Securities of such series, the temporary Securities of such series shall be exchangeable for definitive Securities of such series upon surrender of the temporary Securities of such series at the office or agency of the Company in a Place of Payment for that series, without charge to the Holder. Upon surrender for cancellation of any one or more temporary Securities of any series, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor one or more definitive Securities of the same series, of any authorized denominations and of like tenor and aggregate principal amount. Until so exchanged, the temporary Securities of any series shall in all respects be entitled to the same benefits under this Indenture as definitive Securities of such series and tenor.

### **Section 3.5 Registration; Registration of Transfer and Exchange.**

The Company shall cause to be kept at the Corporate Trust Office of the Trustee a register (the register maintained in such office and in any other office or agency of the Company in a Place of Payment being herein sometimes collectively referred to as the "Security Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall provide for the registration of Securities and of transfers of Securities. The Trustee is hereby appointed "Security Registrar" for the purpose of registering Securities and transfers of Securities as herein provided.

Upon surrender for registration of transfer of any Security of a series at the office or agency of the Company in a Place of Payment for that series, the Company shall execute, and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more new Securities of the same series, of any authorized denominations and of like tenor and aggregate principal amount.

At the option of the Holder, Securities of any series may be exchanged for other Securities of the same series, of any authorized denominations and of like tenor and aggregate principal amount, upon surrender of the Securities to be exchanged at such office or agency. Whenever any Securities are so surrendered for exchange, the Company shall execute, and the Trustee shall authenticate and deliver, the Securities that the Holder making the exchange is entitled to receive. All Securities issued upon any registration of transfer or exchange of Securities shall be the valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Securities surrendered upon such registration of transfer or exchange.

Every Security presented or surrendered for registration of transfer or for exchange shall (if so required by the Company or the Trustee) be duly endorsed, or be accompanied by a written instrument of transfer in form satisfactory to the Company and the Security Registrar duly executed, by the Holder thereof or its attorney duly authorized in writing. No service charge shall be made for any registration of transfer or exchange of Securities, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in connection with any registration of transfer or exchange of Securities, other than exchanges pursuant to Section 3.4, 9.6 or 11.7 not involving any transfer.

If the Securities of any series (or of any series and specified tenor) are to be redeemed in part, the Company shall not be required (A) to issue, register the transfer of or exchange any Securities of that series (or of that series and specified tenor, as the case may be) during a period beginning at the opening of business 15 days before the day of the mailing of a notice of redemption of any such Securities selected for redemption under Section 11.3 and ending at the close of business on the day of such mailing, or (B) to register the transfer of or exchange any Security so selected for redemption in whole or in part, except the unredeemed portion of any Security being redeemed in part.

The provisions of clauses (1), (2), (3) and (4) below shall apply only to Global Securities:

(1) Each Global Security authenticated under this Indenture shall be registered in the name of the Depositary designated for such Global Security or a nominee thereof and delivered to such Depositary or a nominee thereof or custodian therefor, and each such Global Security shall constitute a single Security for all purposes of this Indenture.

(2) Notwithstanding any other provision in this Indenture, no Global Security may be exchanged in whole or in part for Securities registered, and no transfer of a Global Security in whole or in part may be registered, in the name of any Person other than the Depositary for such Global Security or a nominee thereof unless (A) such Depositary (i) has notified the Company that it is unwilling or unable to continue as Depositary for such Global Security or (ii) has ceased to be a clearing agency registered under the Exchange Act, (B) there shall have occurred and be continuing an Event of Default with respect to such Global Security or (C) there shall exist such circumstances, if any, in addition to or in lieu of the foregoing as have been specified for this purpose as contemplated by Section 3.1.

(3) Subject to clause (2) above, any exchange of a Global Security for other Securities may be made in whole or in part, and all Securities issued in exchange for a Global Security or any portion thereof shall be registered in such names as the Depositary for such Global Security shall direct.

(4) Every Security authenticated and delivered upon registration of transfer of, or in exchange for or in lieu of, a Global Security or any portion thereof, whether pursuant to this Section, Section 3.4, 3.6, 9.6 or 11.7 or otherwise, shall be authenticated and delivered in the form of, and shall be, a Global Security, unless such Security is registered in the name of a Person other than the Depositary for such Global Security or a nominee thereof.

### **Section 3.6 Mutilated, Destroyed, Lost and Stolen Securities.**

If any mutilated Security is surrendered to the Trustee, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a new Security of the same series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

If there shall be delivered to the Company and the Trustee (i) evidence to their satisfaction of the destruction, loss or theft of any Security and (ii) such security or indemnity as may be required by them to save each of them and any agent of either of them harmless, then, in the absence of notice to the Company or the Trustee that such Security has been acquired by a bona fide purchaser, the Company shall execute and the Trustee shall authenticate and deliver, in lieu of any such destroyed, lost or stolen Security, a new Security of the same series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

In case any such mutilated, destroyed, lost or stolen Security has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Security, pay such Security.

Upon the issuance of any new Security under this Section, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses

(including the fees and expenses of the Trustee) connected therewith.

Every new Security of any series issued pursuant to this Section in lieu of any destroyed, lost or stolen Security shall constitute an original additional contractual obligation of the Company, whether or not the destroyed, lost or stolen Security shall be at any time enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of that series duly issued hereunder.

The provisions of this Section are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities.

### **Section 3.7 Payment of Interest; Interest Rights Preserved.**

Except as otherwise provided as contemplated by Section 3.1 with respect to any series of Securities, interest on any Security which is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the Person in whose name that Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest.

Any interest on any Security of any series which is payable, but is not punctually paid or duly provided for, on any Interest Payment Date (herein called "Defaulted Interest") shall forthwith cease to be payable to the Holder on the relevant Regular Record Date by virtue of having been such Holder, and such Defaulted Interest may be paid by the Company, at its election in each case, as provided in clause (1) or (2) below:

(1) The Company may elect to make payment of any Defaulted Interest to the Persons in whose names the Securities of such series (or their respective Predecessor Securities) are registered at the close of business on a Special Record Date for the payment of such Defaulted Interest, which shall be fixed in the following manner. The Company shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each Security of such series and the date of the proposed payment, and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as in this clause provided. Thereupon the Trustee shall fix a Special Record Date for the payment of such Defaulted Interest, which shall be not more than 15 days and not less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such Special Record Date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be given to each Holder of Securities of such series in the manner set forth in Section 1.6, not less than 10 days prior to such Special Record Date. Notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor having been so mailed, such Defaulted Interest shall be paid to the Persons in whose names the Securities of such series (or their respective Predecessor Securities) are registered at the close of business on such Special Record Date and shall no longer be payable pursuant to the following clause (2).

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

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

Subject to the provisions of Section 14.2, in the case of any Security (or any part thereof) which is converted after any Regular Record Date and on or prior to the next succeeding Interest Payment Date (other than any Security the principal of (or premium, if any, on) which shall become due and payable, whether at Stated Maturity or by declaration of acceleration or otherwise prior to such Interest Payment Date), interest whose Stated Maturity is on such Interest Payment Date shall be payable on such Interest Payment Date notwithstanding such conversion and such interest (whether or not punctually paid or duly provided for) shall be paid to the Person in whose name that Security (or any one or more Predecessor Securities) is

registered at the close of business on such Regular Record Date. Except as otherwise expressly provided in the immediately preceding sentence or in Section 14.2, in the case of any Security (or any part thereof) which is converted, interest whose Stated Maturity is after the date of conversion of such Security (or such part thereof) shall not be payable.

### **Section 3.8 Persons Deemed Owners.**

Prior to due presentment of a Security for registration of transfer, the Company, the Trustee and any agent of the Company or the Trustee may treat the Person in whose name such Security is registered as the owner of such Security for the purpose of receiving payment of principal of and any premium and (subject to Section 3.7) any interest on such Security and for all other purposes whatsoever, whether or not such Security be overdue, and neither the Company, the Trustee nor any agent of the Company or the Trustee shall be affected by notice to the contrary.

### **Section 3.9 Cancellation.**

All Securities surrendered for payment, redemption, registration of transfer or exchange or for credit against any sinking fund payment shall, if surrendered to any Person other than the Trustee, be delivered to the Trustee and shall be promptly canceled by it. The Company may at any time deliver to the Trustee for cancellation any Securities previously authenticated and delivered hereunder which the Company may have acquired in any manner whatsoever, and may deliver to the Trustee (or to any other Person for delivery to the Trustee) for cancellation any Securities previously authenticated hereunder which the Company has not issued and sold, and all Securities so delivered shall be promptly canceled by the Trustee. No Securities shall be authenticated in lieu of or in exchange for any Securities canceled as provided in this Section, except as expressly permitted by this Indenture. All canceled Securities held by the Trustee shall be disposed of in accordance with its customary procedures.

### **Section 3.10 Computation of Interest.**

Except as otherwise specified as contemplated by Section 3.1 for Securities of any series, interest on the Securities of each series shall be computed on the basis of a 360-day year of twelve 30-day months.

## **ARTICLE 4**

### **SATISFACTION AND DISCHARGE**

#### **Section 4.1 Satisfaction and Discharge of Indenture.**

This Indenture shall upon Company Request cease to be of further effect (except as to any surviving rights of registration of transfer or exchange of Securities herein expressly provided for), and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging satisfaction and discharge of this Indenture, when

(1) either

(A) all Securities theretofore authenticated and delivered (other than (i) Securities which have been destroyed, lost or stolen and which have been replaced or paid as provided in Section 3.6 and (ii) Securities for whose payment money has theretofore been deposited in trust or segregated and held in trust by the Trustee or the Company and thereafter repaid to the Company or discharged from such trust, as provided in Section 10.3) have been delivered to the Trustee for cancellation; or

(B) all such Securities not theretofore delivered to the Trustee for cancellation

(i) have become due and payable, or

(ii) will become due and payable at their Stated Maturity within one year, or

(iii) are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee in the name, and at the expense, of the Company,

and the Company, in the case of (i), (ii) or (iii) above, has deposited or caused to be deposited with the

Trustee as trust funds in trust for the purpose money in an amount sufficient to pay and discharge the entire indebtedness on such Securities not theretofore delivered to the Trustee for cancellation, for principal and any premium and interest to the date of such deposit (in the case of Securities which have become due and payable) or to the Stated Maturity or Redemption Date, as the case may be;

(2) the Company has paid or caused to be paid all other sums payable hereunder by the Company;  
and

(3) the Company has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent herein provided for relating to the satisfaction and discharge of this Indenture have been complied with.

Notwithstanding the satisfaction and discharge of this Indenture, the obligations of the Company to the Trustee under Section 6.7, the obligations of the Trustee to any Authenticating Agent under Section 6.14 and, if money shall have been deposited with the Trustee pursuant to subclause (B) of clause (1) of this Section, the obligations of the Trustee under Section 4.2 and the last paragraph of Section 10.3 shall survive.

#### **Section 4.2 Application of Trust Money.**

Subject to the provisions of the last paragraph of Section 10.3, all money deposited with the Trustee pursuant to Section 4.1 shall be held in trust and applied by it, in accordance with the provisions of the Securities and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the Persons entitled thereto, of the principal and any premium and interest for whose payment such money has been deposited with the Trustee.

### **ARTICLE 5**

#### **REMEDIES**

##### **Section 5.1 Events of Default.**

"Event of Default," wherever used herein with respect to Securities of any series, means any one of the following events (whatever the reason for such Event of Default and whether it shall be occasioned by the provisions of Article 15 or 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), unless in the Board Resolution, supplemental indenture or Officers' Certificate establishing such series, it is provided that such series shall not have the benefit of said Event of Default:

(1) default in the payment of any interest upon any Security of that series when it becomes due and payable, and continuance of such default for a period of 60 days; or

(2) default in the payment of the principal of or any premium on any Security of that series at its Maturity; or

(3) default in the deposit of any sinking fund payment, when and as due by the terms of a Security of that series; or

(4) default in the performance, or breach, of any covenant or warranty of the Company in this Indenture (other than a covenant or warranty a default in whose performance or whose breach is elsewhere in this Section specifically dealt with or which has expressly been included in this Indenture solely for the benefit of series of Securities other than that series), 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 Company by the Trustee or to the Company and the Trustee by the Holders of at least 25% in principal amount of the Outstanding Securities of that series a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a "Notice of Default" hereunder; or

(5) the entry by a court having jurisdiction in the premises of (A) a decree or order for relief in respect of the Company in an involuntary case or proceeding under any applicable Federal or State bankruptcy, insolvency,

reorganization or other similar law or (B) a decree or order adjudging the Company a bankrupt or insolvent, or approving as properly filed a petition seeking reorganization, arrangement, adjustment or composition of or in respect of the Company under any applicable Federal or State law, or appointing a custodian, receiver, liquidator, assignee, trustee, sequestrator or other similar official of the Company or of any substantial part of its property, or ordering the winding up or liquidation of its affairs, and the continuance of any such decree or order for relief or any such other decree or order unstayed and in effect for a period of 90 consecutive days; or

(6) the commencement by the Company of a voluntary case or proceeding under any applicable Federal or State bankruptcy, insolvency, reorganization or other similar law or of any other case or proceeding to be adjudicated a bankrupt or insolvent, or the consent by it to the entry of a decree or order for relief in respect of the Company in an involuntary case or proceeding under any applicable Federal or State bankruptcy, insolvency, reorganization or other similar law or to the commencement of any bankruptcy or insolvency case or proceeding against it, or the filing by it of a petition or answer or consent seeking reorganization or relief under any applicable Federal or State law, or the consent by it to the filing of such petition or to the appointment of or taking possession by a custodian, receiver, liquidator, assignee, trustee, sequestrator or other similar official of the Company or of any substantial part of its property, or the making by it of an assignment for the benefit of creditors, or the admission by it in writing of its inability to pay its debts generally as they become due, or the taking of corporate action by the Company in furtherance of any such action; or

(7) any other Event of Default provided with respect to Securities of that series in the Board Resolution, supplemental indenture or Officers' Certificate establishing that series.

## **Section 5.2 Acceleration of Maturity; Rescission and Annulment.**

(a) Unless the Board Resolution, supplemental indenture or Officers' Certificate establishing such series provides otherwise, if an Event of Default (other than an Event of Default specified in Section 5.1(5) or 5.1(6)) with respect to Securities of any series at the time Outstanding occurs and is continuing, then in every such case the Trustee or the Holders of not less than 25% in principal amount of the Outstanding Securities of that series may declare the principal amount of all the Securities of that series (or, if any Securities of that series are Original Issue Discount Securities, such portion of the principal amount of such Securities as may be specified by the terms thereof), and premium, if any, together with accrued and unpaid interest, if any, thereon, to be due and payable immediately, by a notice in writing to the Company (and to the Trustee if given by the Holders), and upon any such declaration such principal amount (or specified amount), and premium, if any, together with accrued and unpaid interest, if any, thereon, shall become immediately due and payable. If an Event of Default specified in Section 5.1(5) or 5.1(6) with respect to Securities of any series at the time Outstanding occurs, the principal amount of all the Securities of that series (or, if any Securities of that series are Original Issue Discount Securities, such portion of the principal amount of such Securities as may be specified by the terms thereof), and premium, if any, together with accrued and unpaid interest, if any, thereon, shall automatically, and without any declaration or other action on the part of the Trustee or any Holder, become immediately due and payable. Any payments by the Company on the Securities following any such acceleration will be subject to the subordination provisions of Article 15 to the extent provided therein.

(b) Notwithstanding the foregoing, at the election of the Company, the sole remedy with respect to an Event of Default for the failure by the Company to comply with its obligations under Section 314(a)(1) of the Trust Indenture Act relating to the Company's failure to file any documents or reports that the Company is required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act or of its covenants set forth in Section 7.4 (any such Event of Default, a "Reporting Default"), shall for the first 180 calendar days after the occurrence of such Reporting Default consist exclusively of the right to receive additional interest (the "Additional Interest") on the Securities at an annual rate equal to (i) 0.25% of the principal amount of the Securities for the first 90 calendar days after the occurrence of such Reporting Default and (ii) 0.50% of the principal amount of the Securities from the 91st day to, and including, the 180th day after the occurrence of such Reporting Default. If the Company so elects, the Additional Interest shall accrue on all Outstanding Securities from and including the date on which such Reporting Default first occurs until such violation is cured or waived and shall be payable as provided in Section 3.7. On the 181st day after such Reporting Default (if such violation is not cured or waived prior to such 181st calendar day), then the Trustee or the Holders of not less than 25% in principal amount of the Outstanding securities may declare the principal of, and premium, if any, together with accrued and unpaid interest, if any, on all such Securities to be due and payable immediately.

If the Company elects to pay the Additional Interest as the sole remedy for the Reporting Default, the Company shall notify in writing, by a certificate, the Holders, the Paying Agent and the Trustee of such election at any time on or

before the close of business on the first Business Day following the date on which such Event of Default first occurs. Unless and until a Responsible Officer of the Trustee receives at the Corporate Trust Office such a certificate, the Trustee may assume without inquiry that Additional Interest is not payable. The Company shall pay the Additional Interest semi-annually in arrears, with the first semi-annual payment due on the first Interest Payment Date following the date of such Reporting Default, in the same manner as described on the face of the Security.

(c) At any time after such a declaration of acceleration with respect to Securities of any series has been made and before a judgment or decree for payment of the money due has been obtained by the Trustee as hereinafter in this Article provided, the Holders of a majority in principal amount of the Outstanding Securities of that series, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if

(1) the Company has paid or deposited with the Trustee a sum sufficient to pay

(A) all overdue interest on all Securities of that series,

(B) the principal of (and premium, if any, on) any Securities of that series which have become due otherwise than by such declaration of acceleration and any interest thereon at the rate or rates prescribed therefor in such Securities,

(C) to the extent that payment of such interest is lawful, interest upon overdue interest at the rate or rates prescribed therefor in such Securities, and

(D) all sums paid or advanced by the Trustee hereunder and the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel; and

(2) all Events of Default with respect to Securities of that series, other than the non-payment of the principal of Securities of that series that have become due solely by such declaration of acceleration, have been cured or waived as provided in Section 5.13.

No such rescission shall affect any subsequent default or impair any right consequent thereon.

### **Section 5.3 Collection of Indebtedness and Suits for Enforcement by Trustee.**

The Company covenants that if

(1) default is made in the payment of any interest on any Security when such interest becomes due and payable and such default continues for a period of 30 days, or

(2) default is made in the payment of the principal of (or premium, if any, on) any Security at the Maturity thereof, the Company will, upon demand of the Trustee, pay to it, for the benefit of the Holders of such Securities, the whole amount then due and payable on such Securities for principal and any premium and interest and, to the extent that payment of such interest shall be legally enforceable, interest on any overdue principal and premium and on any overdue interest, at the rate or rates prescribed therefor in such Securities, and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel.

If an Event of Default with respect to Securities of any series occurs and is continuing, the Trustee may in its discretion proceed to protect and enforce its rights and the rights of the Holders of Securities of such series by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any such rights, whether for the specific enforcement of any covenant or agreement in this Indenture or in aid of the exercise of any power granted herein, or to enforce any other proper remedy.

### **Section 5.4 Trustee May File Proofs of Claim.**

In case of any judicial proceeding relative to the Company (or any other obligor upon the Securities), its property or its creditors, the Trustee shall be entitled and empowered, by intervention in such proceeding or otherwise, to take any and all actions authorized under the Trust Indenture Act in order to have claims of the Holders and the Trustee allowed in any such



proceeding. In particular, the Trustee shall be authorized to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same; and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay to the Trustee any amount due it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 6.7. No provision of this Indenture shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Securities or the rights of any Holder thereof or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding; provided, however, that the Trustee may, on behalf of the Holders, vote for the election of a trustee in bankruptcy or similar official and be a member of a creditors' or other similar committee.

#### **Section 5.5 Trustee May Enforce Claims Without Possession of Securities.**

All rights of action and claims under this Indenture or the Securities may be prosecuted and enforced by the Trustee without the possession of any of the Securities or the production thereof in any proceeding relating thereto, and any such proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for the payment of the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, be for the ratable benefit of the Holders of the Securities in respect of which such judgment has been recovered.

#### **Section 5.6 Application of Money Collected.**

Any money collected by the Trustee pursuant to this Article shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such money on account of principal or any premium or interest, upon presentation of the Securities and the notation thereon of the payment if only partially paid and upon surrender thereof if fully paid:

FIRST: To the payment of all amounts due the Trustee under Section 6.7;

SECOND: Subject to Article 15, to the payment of the amounts then due and unpaid for principal of and any premium, if any, and interest on the Securities in respect of which or for the benefit of which such money has been collected, ratably, without preference or priority of any kind, according to the amounts due and payable on such Securities for principal and any premium, if any, and interest, respectively; and

THIRD: The balance, if any, to the Company or any other Person or Persons entitled thereto.

#### **Section 5.7 Limitation on Suits.**

No Holder of any Security of any series shall have any right to institute any proceeding, judicial or otherwise, with respect to this Indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless

(1) such Holder has previously given written notice to the Trustee of a continuing Event of Default with respect to the Securities of that series;

(2) the Holders of at least 25% in aggregate principal amount of the Outstanding Securities of that series shall have made written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee hereunder;

(3) such Holder or Holders have offered to the Trustee reasonable indemnity against the costs, expenses and liabilities to be incurred in compliance with such request;

(4) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity has failed to institute any such proceeding; and

(5) no direction inconsistent with such written request has been given to the Trustee during such 60-day period by the Holders of a majority in principal amount of the Outstanding Securities of that series;

it being understood and intended that no one or more of such Holders shall have any right in any manner whatever by virtue of, or by availing of, any provision of this Indenture to affect, disturb or prejudice the rights of any other of such Holders, or to obtain or to seek to obtain priority or preference over any other of such Holders or to enforce any right under this Indenture, except in the manner herein provided and for the equal and ratable benefit of all of such Holders.

#### **Section 5.8 Unconditional Right of Holders to Receive Principal, Premium and Interest and to Convert.**

Notwithstanding any other provision in this Indenture, the Holder of any Security shall have the right, which is absolute and unconditional, to receive payment of the principal of and any premium and (subject to Section 3.7) interest on such Security on the respective Stated Maturities expressed in such Security (or, in the case of redemption, on the Redemption Date), to convert such Securities in accordance with Article 14 to the extent that such right to convert is applicable to such Security, and to institute suit for the enforcement of any such payment, and such rights shall not be impaired without the consent of such Holder.

#### **Section 5.9 Restoration of Rights and Remedies.**

If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Company, the Trustee and the Holders shall be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Trustee and the Holders shall continue as though no such proceeding had been instituted.

#### **Section 5.10 Rights and Remedies Cumulative.**

Except as otherwise provided with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities in the last paragraph of Section 3.6, no right or remedy herein conferred upon or reserved to the Trustee or to the Holders is intended to be exclusive of any other right or remedy, and every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

#### **Section 5.11 Delay or Omission Not Waiver.**

No delay or omission of the Trustee or of any Holder of any Securities to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of any such Event of Default or an acquiescence therein. Every right and remedy given by this Article or by law to the Trustee or to the Holders may be exercised from time to time, and as often as may be deemed expedient, by the Trustee (subject to the limitations contained in this Indenture) or by the Holders, as the case may be.

#### **Section 5.12 Control by Holders.**

The Holders of a majority in principal amount of the Outstanding Securities of any series shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee, with respect to the Securities of such series, provided that

(1) such direction shall not be in conflict with any rule of law or with this Indenture and the Trustee shall not have determined that the action so directed would be unjustly prejudicial to Holders of Securities of that series, or any other series, not taking part in such direction; and

(2) the Trustee may take any other action deemed proper by the Trustee that is not inconsistent with such direction or this Indenture.

#### **Section 5.13 Waiver of Past Defaults.**

The Holders of not less than a majority in principal amount of the Outstanding Securities of any series may on behalf of the Holders of all the Securities of such series waive any past default hereunder with respect to such series and its consequences, except

(1) a default in the payment of the principal of or any premium or interest on any Security of such series as and when the same shall become due and payable by the terms thereof, otherwise than by acceleration (unless such default has been cured and a sum sufficient to pay all matured installments of interest, principal and premium, if any, has been deposited with the Trustee), or

(2) to the extent such right is applicable to such Security, a failure by the Company on request to convert any Security into Common Stock; or

(3) in respect of a covenant or provision hereof which under Article 9 cannot be modified or amended without the consent of the Holder of each Outstanding Security of such series affected.

Upon any such waiver, such default shall cease to exist, and any Event of Default arising therefrom shall be deemed to have been cured, for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

#### **Section 5.14 Undertaking for Costs.**

In any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken, suffered or omitted by it as Trustee, a court may require any party litigant in such suit to file an undertaking to pay the costs of such suit, and may assess costs against any such party litigant, in the manner and to the extent provided in the Trust Indenture Act; provided that neither this Section nor the Trust Indenture Act shall be deemed to authorize any court to require such an undertaking or to make such an assessment in any suit instituted by the Company or in any suit for the enforcement of the right to convert any Security in accordance with Article 14.

#### **Section 5.15 Waiver of Usury, Stay or Extension Laws.**

The Company covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, or plead, or in any manner whatsoever claim or take the benefit or advantage of, any usury, stay or extension law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of this Indenture; and the Company (to the extent that it may lawfully do so) hereby expressly waives all benefit or advantage of any such law and covenants that it will not hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law had been enacted.

### **ARTICLE 6**

#### **THE TRUSTEE**

#### **Section 6.1 Certain Duties and Responsibilities.**

The duties and responsibilities of the Trustee shall be as provided by the Trust Indenture Act. Notwithstanding the foregoing, no provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder, or in the exercise of any of its rights or powers if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it. Whether or not therein expressly so provided, every provision of this Indenture relating to the conduct or affecting the liability of or affording protection to the Trustee shall be subject to the provisions of this Section.

#### **Section 6.2 Notice of Defaults.**

If a default occurs hereunder with respect to Securities of any series, the Trustee shall give the Holders of Securities of such series notice of such default as and to the extent provided by the Trust Indenture Act; provided, however, that except in the case of a default in the payment of principal of (or premium, if any) or interest on any Securities of such series or in the payment of any sinking fund installment or any conversion right applicable to Securities of such series, the Trustee shall be protected in withholding such notice if and so long as a trust committee of directors and/or Responsible Officers of the Trustee in good faith determine that the withholding of such notice is in the interests of the holders of Securities of such series; provided, further, however, that in the case of any default of the character specified in Section 5.1(4) with respect to Securities of such series, no such notice to Holders shall be given until at least 60 days after the occurrence thereof. For the purpose of this Section, the term "default" means any event that is, or after notice or lapse of time or both would become, an

Except with respect to Section 10.1, the Trustee shall have no duty to inquire as to the performance of the Company with respect to the covenants contained in Article 10. In addition, the Trustee shall not be deemed to have knowledge of an Event of Default except (i) any Default or Event of Default occurring pursuant to Sections 5.1(1), 5.1(2) and 5.1(3) (defaults in payments on the Securities) or (ii) any Default or Event of Default of which the Trustee shall have received written notification or obtained actual knowledge.

Delivery of reports, information and documents to the Trustee under Section 7.4 is for informational purposes only and the Trustee's receipt of the foregoing shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Company's compliance with any of their covenants hereunder (as to which the Trustee is entitled to rely conclusively on Officers' Certificates).

### **Section 6.3 Certain Rights of Trustee.**

Subject to the provisions of Section 6.1:

(1) in the absence of bad faith on the part of the Trustee, the Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(2) any request or direction of the Company mentioned herein shall be sufficiently evidenced by a Company Request or Company Order, and any resolution of the Board of Directors shall be sufficiently evidenced by a Board Resolution;

(3) whenever in the administration of this Indenture the Trustee shall deem it desirable that a matter be proved or established prior to taking, suffering or omitting any action hereunder, the Trustee (unless other evidence be herein specifically prescribed) is entitled to and may, in the absence of bad faith on its part, rely upon an Officers' Certificate;

(4) the Trustee may consult with counsel and the written advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon;

(5) the Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any of the Holders pursuant to this Indenture, unless such Holders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction;

(6) 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, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall be entitled to examine the books, records and premises of the Company, personally or by agent or attorney; and

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

### **Section 6.4 Not Responsible for Recitals or Issuance of Securities.**

The recitals contained herein and in the Securities, except the Trustee's certificates of authentication, shall be taken as the statements of the Company, and neither the Trustee nor any Authenticating Agent assumes any responsibility for their correctness. The Trustee makes no representations as to the validity, sufficiency or priority of this Indenture or of the Securities. Neither the Trustee nor any Authenticating Agent shall be accountable for the use or application by the Company

### **Section 6.5 May Hold Securities and Act as Trustee under Other Indentures.**

The Trustee, any Authenticating Agent, any Paying Agent, any Security Registrar or any other agent of the Company, in its individual or any other capacity, may become the owner or pledgee of Securities and, subject to Sections 6.8 and 6.13, may otherwise deal with the Company with the same rights it would have if it were not Trustee, Authenticating Agent, Paying Agent, Security Registrar or such other agent. Subject to the limitations imposed by the Trust Indenture Act, nothing in this Indenture shall prohibit the Trustee from becoming and acting as trustee under other indentures under which other securities, or certificates of interest of participation in other securities, of the Company are outstanding in the same manner as if it were not Trustee hereunder.

### **Section 6.6 Money Held in Trust.**

Money held by the Trustee in trust hereunder need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for interest on any money received by it hereunder except as otherwise agreed with the Company.

### **Section 6.7 Compensation and Reimbursement.**

The Company agrees:

(1) to pay to the Trustee from time to time reasonable compensation for all services rendered by it hereunder (which compensation shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust);

(2) except as otherwise expressly provided herein, to reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by the Trustee in accordance with any provision of this Indenture (including the reasonable compensation and the expenses and disbursements of its agents and counsel), except any such expense, disbursement or advance as may be attributable to its negligence or bad faith; and

(3) to indemnify the 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 the trust or trusts hereunder, including the costs and expenses of defending itself against any claim or liability in connection with the exercise or performance of any of its powers or duties hereunder.

When the Trustee incurs expenses or renders services after an Event of Default specified in Section 5.1(5) or Section 5.1(6) hereof occurs, the expenses and the compensation for the services (including the fees and expenses of its agents and counsel) are intended to constitute expenses of administration under any applicable bankruptcy, insolvency, reorganization or similar law.

### **Section 6.8 Conflicting Interests.**

If the Trustee has or shall acquire a conflicting interest within the meaning of the Trust Indenture Act and there is an Event of Default under the Securities of that series, the Trustee shall either eliminate such interest or resign, to the extent and in the manner provided by, and subject to the provisions of, the Trust Indenture Act and this Indenture. To the extent permitted by the Trust Indenture Act, the Trustee shall not be deemed to have a conflicting interest by virtue of being a trustee under this Indenture with respect to Securities of more than one series.

### **Section 6.9 Corporate Trustee Required; Eligibility.**

There shall at all times be one (and only one) Trustee hereunder with respect to the Securities of each series, which may be Trustee hereunder for Securities of one or more other series. Each Trustee shall be a Person that is eligible pursuant to the Trust Indenture Act to act as such and has (or if the Trustee is a member of a bank holding company system, its bank holding company has) a combined capital and surplus of at least \$50,000,000. If any such Person or bank holding company publishes reports of condition at least annually, pursuant to law or to the requirements of its supervising or examining

authority, then for the purposes of this Section and to the extent permitted by the Trust Indenture Act, the combined capital and surplus of such Person or bank holding company shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time the Trustee with respect to the Securities of any series shall cease to be eligible in accordance with the provisions of this Section, it shall resign immediately in the manner and with the effect hereinafter specified in this Article.

#### **Section 6.10 Resignation and Removal; Appointment of Successor.**

No resignation or removal of the Trustee and no appointment of a successor Trustee pursuant to this Article shall become effective until the acceptance of appointment by the successor Trustee in accordance with the applicable requirements of Section 6.11. The Trustee may resign at any time with respect to the Securities of one or more series by giving written notice thereof to the Company. If the instrument of acceptance by a successor Trustee required by Section 6.11 shall not have been delivered to the Trustee within 30 days after the giving of such notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor Trustee with respect to the Securities of such series.

The Trustee may be removed at any time with respect to the Securities of any series by Act of the Holders of a majority in principal amount of the Outstanding Securities of such series, delivered to the Trustee and to the Company.

If at any time:

- (1) the Trustee shall fail to comply with Section 6.8 after written request therefor by the Company or by any Holder who has been a bona fide Holder of a Security for at least six months, or
- (2) the Trustee shall cease to be eligible under Section 6.9 and shall fail to resign after written request therefor by the Company or by any such Holder, or
- (3) the Trustee shall become incapable of acting or shall be adjudged a bankrupt or insolvent or a receiver 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 Company by a Board Resolution may remove the Trustee with respect to all Securities, or (B) subject to Section 5.14, any Holder who has been a bona fide Holder of a Security for at least six months may, on behalf of such Holder and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee with respect to all Securities and the appointment of a successor Trustee or Trustees.

If the Trustee shall resign, be removed or become incapable of acting, or if a vacancy shall occur in the office of Trustee for any cause, with respect to the Securities of one or more series, the Company, by a Board Resolution, shall promptly appoint a successor Trustee or Trustees with respect to the Securities of that or those series (it being understood that any such successor Trustee may be appointed with respect to the Securities of one or more or all of such series and that at any time there shall be only one Trustee with respect to the Securities of any particular series) and shall comply with the applicable requirements of Section 6.11. If, within one year after such resignation, removal or incapability, or the occurrence of such vacancy, a successor Trustee with respect to the Securities of any series shall be appointed by Act of the Holders of a majority in principal amount of the Outstanding Securities of such series delivered to the Company and the retiring Trustee, the successor Trustee so appointed shall, forthwith upon its acceptance of such appointment in accordance with the applicable requirements of Section 6.11, become the successor Trustee with respect to the Securities of such series and to that extent supersede the successor Trustee appointed by the Company. If no successor Trustee with respect to the Securities of any series shall have been so appointed by the Company or the Holders and accepted appointment in the manner required by Section 6.11, the retiring Trustee may petition, or any Holder who has been a bona fide Holder of a Security of such series for at least six months may petition, on behalf of such Holder and all others similarly situated, any court of competent jurisdiction for the appointment of a successor Trustee with respect to the Securities of such series.

The Company shall give notice of each resignation and each removal of the Trustee with respect to the Securities of any series and each appointment of a successor Trustee with respect to the Securities of any series to all Holders of Securities of such series in the manner provided in Section 1.6. Each notice shall include the name of the successor Trustee with respect to the Securities of such series and the address of its Corporate Trust Office.

### **Section 6.11 Acceptance of Appointment by Successor.**

In case of the appointment hereunder of a successor Trustee with respect to all Securities, every such successor Trustee so appointed shall execute, acknowledge and deliver to the Company and to the retiring Trustee an instrument accepting such appointment, and thereupon the resignation or removal of the retiring Trustee shall become effective and such successor Trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee; but, on the request of the Company or the successor Trustee, such retiring Trustee shall, upon payment of its charges, execute and deliver an instrument transferring to such successor Trustee all the rights, powers and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor Trustee all property and money held by such retiring Trustee hereunder.

In case of the appointment hereunder of a successor Trustee with respect to the Securities of one or more (but not all) series, the Company, the retiring Trustee and each successor Trustee with respect to the Securities of one or more series shall execute and deliver an indenture supplemental hereto wherein each successor Trustee shall accept such appointment and which (1) shall contain such provisions as shall be necessary or desirable to transfer and confirm to, and to vest in, each successor Trustee all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor Trustee relates, (2) if the retiring Trustee is not retiring with respect to all Securities, shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series as to which the retiring Trustee is not retiring shall continue to be vested in the retiring Trustee, and (3) shall add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee, it being understood that nothing herein or in such supplemental indenture shall constitute such Trustees co-trustees of the same trust and that each such Trustee shall be trustee of a trust or trusts hereunder separate and apart from any trust or trusts hereunder administered by any other such Trustee; and upon the execution and delivery of such supplemental indenture the resignation or removal of the retiring Trustee shall become effective to the extent provided therein and each such successor Trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor Trustee relates; but, on request of the Company or any successor Trustee, such retiring Trustee shall duly assign, transfer and deliver to such successor Trustee all property and money held by such retiring Trustee hereunder with respect to the Securities of that or those series to which the appointment of such successor Trustee relates.

Upon request of any such successor Trustee, the Company shall execute any and all instruments for more fully and certainly vesting in and confirming to such successor Trustee all such rights, powers and trusts referred to in the first or second preceding paragraph, as the case may be. No successor Trustee shall accept its appointment unless at the time of such acceptance such successor Trustee shall be qualified and eligible under this Article.

### **Section 6.12 Merger, Conversion, Consolidation or Succession to Business.**

Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to all or substantially all the corporate trust business of the Trustee (including the administration of the trust created by this Indenture), shall be the successor of the Trustee hereunder, provided such corporation shall be otherwise qualified and eligible under this Article, without the execution or filing of any paper or any further act on the part of any of the parties hereto. In case any Securities shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to such authenticating Trustee may adopt such authentication and deliver the Securities so authenticated with the same effect as if such successor Trustee had itself authenticated such Securities. In the event that any Securities shall not have been authenticated by such predecessor Trustee, any such successor Trustee may authenticate and deliver such Securities in either its own name or that of a predecessor Trustee, with the full force and effect which this Indenture provides for the certificate of authentication of the Trustee.

### **Section 6.13 Preferential Collection of Claims Against Company.**

If and when the Trustee shall be or become a creditor of the Company (or any other obligor upon the Securities), the Trustee shall be subject to the provisions of the Trust Indenture Act regarding the collection of claims against the Company (or any such other obligor).

#### Section 6.14 Appointment of Authenticating Agent.

The Trustee may appoint an Authenticating Agent or Agents with respect to one or more series of Securities which shall be authorized to act on behalf of the Trustee to authenticate Securities of such series issued upon original issue and upon exchange, registration of transfer or partial redemption thereof or pursuant to Section 3.6, and Securities so authenticated shall be entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. Wherever reference is made in this Indenture to the authentication and delivery of Securities by the Trustee or the Trustee's certificate of authentication, such reference shall be deemed to include authentication and delivery on behalf of the Trustee by an Authenticating Agent and a certificate of authentication executed on behalf of the Trustee by an Authenticating Agent. Each Authenticating Agent shall be acceptable to the Company and shall at all times be a corporation organized and doing business under the laws of the United States of America, any State thereof or the District of Columbia, authorized under such laws to act as Authenticating Agent, having (or if the Authenticating Agent is a member of a bank holding company system, its bank holding company has) a combined capital and surplus of not less than \$50,000,000 and subject to supervision or examination by Federal or State authority. If such Authenticating Agent publishes reports of condition at least annually, pursuant to law or to the requirements of said supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such Authenticating Agent shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time an Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, such Authenticating Agent shall resign immediately in the manner and with the effect specified in this Section.

Any corporation into which an Authenticating Agent may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which such Authenticating Agent shall be a party, or any corporation succeeding to the corporate agency or corporate trust business of an Authenticating Agent, shall continue to be an Authenticating Agent, provided such corporation shall be otherwise eligible under this Section, without the execution or filing of any paper or any further act on the part of the Trustee or the Authenticating Agent.

An Authenticating Agent may resign at any time by giving written notice thereof to the Trustee and to the Company. The Trustee may at any time terminate the agency of an Authenticating Agent by giving written notice thereof to such Authenticating Agent and to the Company. Upon receiving such a notice of resignation or upon such a termination, or in case at any time such Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, the Trustee may appoint a successor Authenticating Agent which shall be acceptable to the Company and shall give notice of such appointment in the manner provided in Section 1.6 to all Holders of Securities of the series with respect to which such Authenticating Agent will serve. Any successor Authenticating Agent upon acceptance of its appointment hereunder shall become vested with all the rights, powers and duties of its predecessor hereunder, with like effect as if originally named as an Authenticating Agent. No successor Authenticating Agent shall be appointed unless eligible under the provisions of this Section.

The Trustee agrees to pay to each Authenticating Agent from time to time reasonable compensation for its services under this Section, and the Trustee shall be entitled to be reimbursed for such payments, subject to the provisions of Section 6.7.

If an appointment with respect to one or more series is made pursuant to this Section 6.14, the Securities of such series may have endorsed thereon, in lieu of the Trustee's certificate of authentication, an alternative certificate of authentication in the following form:

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

By: \_\_\_\_\_  
As Authenticating Agent

By: \_\_\_\_\_  
As Authenticating Officer



**HOLDERS' LISTS AND REPORTS BY TRUSTEE AND COMPANY****Section 7.1 Company to Furnish Trustee Names and Addresses of Holders.**

The Company will furnish or cause to be furnished to the Trustee

(1) semi-annually, not later than 15 days after the Regular Record Date for each respective series of Securities, a list, in such form as the Trustee may reasonably require, of the names and addresses of the Holders of Securities of each series as of such Regular Record Date, as the case may be, or if there is no Regular Record Date for such series of Securities, semi-annually, and

(2) at such other times as the Trustee may request in writing, within 30 days after the receipt by the Company of any such request, a list of similar form and content as of a date not more than 15 days prior to the time such list is furnished;

provided that no such lists need be furnished by the Company to the Trustee so long as the Trustee is acting as Security Registrar.

**Section 7.2 Preservation of Information; Communications to Holders.**

The Trustee shall preserve, in as current a form as is reasonably practicable, the names and addresses of Holders contained in the most recent list furnished to the Trustee as provided in Section 7.1 and the names and addresses of Holders received by the Trustee in its capacity as Security Registrar. The Trustee may destroy any list furnished to it as provided in Section 7.1 upon receipt of a new list so furnished.

The rights of Holders to communicate with other Holders with respect to their rights under this Indenture or under the Securities, and the corresponding rights and privileges of the Trustee, shall be as provided by the Trust Indenture Act. Every Holder of Securities, by receiving and holding the same, agrees with the Company and the Trustee that neither the Company nor the Trustee nor any agent of either of them shall be held accountable by reason of any disclosure of information as to names and addresses of Holders made pursuant to the Trust Indenture Act.

**Section 7.3 Reports by Trustee.**

The Trustee shall transmit to Holders such reports concerning the Trustee and its actions under this Indenture as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant thereto.

Reports so required to be transmitted at stated intervals of not more than 12 months shall be transmitted no later than July 15 in each calendar year, commencing with the first July 15 after the first issuance of Securities pursuant to this Indenture.

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

**Section 7.4 Reports by Company.**

Any information, documents or other reports that the Company shall file with the Commission pursuant to Section 13 or 15(d) of the Exchange Act shall be filed with the Trustee within 15 days after the same is filed with the Commission; provided that any such information, documents or reports filed or furnished with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval (or EDGAR) system shall be deemed to be filed with the Trustee as of the time such information, documents or reports are filed or furnished via EDGAR.

**CONSOLIDATION, MERGER, CONVEYANCE, TRANSFER OR LEASE****Section 8.1 Company May Consolidate, etc., Only on Certain Terms.**

The Company shall not consolidate with or merge into any other Person (other than a Subsidiary of the Company) (in a transaction in which the Company is not the surviving corporation) or convey, transfer or lease its properties and assets substantially as an entirety to any Person (other than a Subsidiary of the Company), unless:

(1) in case the Company shall consolidate with or merge into another Person (in a transaction in which the Company is not the surviving corporation) or convey, transfer or lease its properties and assets substantially as an entirety to any Person, the Person formed by such consolidation or into which the Company is merged or the Person which acquires by conveyance or transfer, or which leases, the properties and assets of the Company substantially as an entirety shall be a corporation, limited liability company partnership, trust or other business entity, shall be organized and validly existing under the laws of the United States of America, any State thereof or the District of Columbia and 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 of and any premium and interest on all the Securities and the performance or observance of every covenant of this Indenture on the part of the Company to be performed or observed and the conversion rights shall be provided for in accordance with Article 14, if applicable, or as otherwise specified pursuant to Section 3.1, by supplemental indenture satisfactory in form to the Trustee, executed and delivered to the Trustee, by the Person (if other than the Company) formed by such consolidation or into which the Company shall have been merged or by the Person which shall have acquired the Company's assets;

(2) immediately after giving effect to such transaction and treating any indebtedness which becomes an obligation of the Company or any Subsidiary as a result of such transaction as having been incurred by the Company or such Subsidiary at the time of 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 occurred and be continuing; and

(3) the Company has delivered to the Trustee an Officers' 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.

**Section 8.2 Successor Substituted.**

Upon any consolidation of the Company with, or merger of the Company into, any other Person or any conveyance, transfer or lease of the properties and assets of the Company substantially as an entirety in accordance with Section 8.1, the successor Person formed by such consolidation or into which the Company 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 Company under this Indenture with the same effect as if such successor Person had been named as the Company 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.

**ARTICLE 9****SUPPLEMENTAL INDENTURES****Section 9.1 Supplemental Indentures Without Consent of Holders.**

Without the consent of any Holders, the Company, when authorized by a Board Resolution, and the Trustee, at any time and from time to time, may enter into one or more indentures supplemental hereto, in form satisfactory to the Trustee, for any of the following purposes:

(1) to evidence the succession of another Person to the Company, or successive successions, and the assumption by any such successor of the covenants of the Company herein and in the Securities in compliance with

(2) to add to the covenants of the Company for the benefit of the Holders of all or any series of Securities (and if such covenants are to be for the benefit of less than all series of Securities, stating that such covenants are expressly being included solely for the benefit of such series) or to surrender any right or power herein conferred upon the Company; or

(3) to add any additional Events of Default for the benefit of the Holders of all or any series of Securities (and if such additional Events of Default are to be for the benefit of less than all series of Securities, stating that such additional Events of Default are expressly being included solely for the benefit of such series); or

(4) to add to or change any of the provisions of this Indenture to such extent as shall be necessary to permit or facilitate the issuance of Securities in bearer form, registrable or not registrable as to principal, and with or without interest coupons, or to permit or facilitate the issuance of Securities in uncertificated form; or

(5) 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 (A) shall neither (i) apply to any Security of any series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision nor (ii) modify the rights of the Holder of any such Security with respect to such provision or (B) shall become effective only when there is no such Security Outstanding; or

(6) to secure the Securities, including provisions regarding the circumstances under which collateral may be released or substituted; or

(7) to add or provide for a guaranty of the Securities or additional obligors on the Securities; or

(8) to establish the form or terms of Securities of any series as permitted by Sections 2.1 and 3.1; or

(9) 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; or

(10) to cure any ambiguity, to correct or supplement any provision herein which may be defective or inconsistent with any other provision herein, or to make any other provisions with respect to matters or questions arising under this Indenture, provided that such action pursuant to this clause (10) shall not adversely affect the interests of the Holders of Securities of any series in any material respect; or

(11) to supplement any of the provisions of the Indenture to such extent as shall be necessary to permit or facilitate the defeasance and discharge of any series of Securities pursuant to Articles 4 and 13, provided that any such action shall not adversely affect the interests of the Holders of Securities of such series or any other series of Securities in any material respect.

## **Section 9.2 Supplemental Indentures with Consent of Holders.**

With the consent of the Holders of a majority in principal amount of the Outstanding Securities of each series affected by such supplemental indenture, by Act of said Holders delivered to the Company and the Trustee, the Company, when authorized by a Board Resolution, and the Trustee may also enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of modifying in any manner the rights of the Holders of Securities of such series under this Indenture; provided, however, that no such supplemental indenture shall, without the consent of the Holder of each Outstanding Security affected thereby,

(1) change the Stated Maturity of the principal of, or any installment of principal of or interest on, any Security, or reduce the principal amount thereof or the rate of interest thereon or any premium payable upon the redemption thereof, or reduce the amount of the principal of an Original Issue Discount Security or any other Security which would be due and payable upon a declaration of acceleration of the Maturity thereof pursuant to Section 5.2, or change the place of payment or the coin or currency in which, any Security or any premium or

interest thereon is payable, or impair the right to institute suit for the enforcement of any such payment on or after the Stated Maturity thereof (or, in the case of redemption, on or after the Redemption Date), or modify the provisions of this Indenture with respect to the subordination of such series of Securities in a manner materially adverse to the Holders of Securities of such series, or, in the case of Securities of any series that are convertible into Securities or other securities of the Company, adversely affect the right of Holders to convert any of the Securities of such series other than as provided in or pursuant to this Indenture, or

(2) reduce the percentage in principal amount of the Outstanding Securities of any series, the consent of whose Holders is required for any such supplemental indenture, or the consent of whose Holders is required for any waiver (of compliance with certain provisions of this Indenture or certain defaults hereunder and their consequences) provided for in this Indenture, or

(3) modify any of the provisions of this Section, Section 5.13 or Section 10.8, except to increase any such percentage or to provide that certain other provisions of this Indenture cannot be modified or waived without the consent of the Holder of each Outstanding Security affected thereby; provided, however, that this clause shall not be deemed to require the consent of any Holder with respect to changes in the references to “the Trustee” and concomitant changes in this Section and Section 10.8, or the deletion of this proviso, in accordance with the requirements of Sections 6.11 and 9.1(8), or

(4) if applicable, make any change that adversely affects the right to convert any security as provided in Article 14 or pursuant to Section 3.1 (except as permitted by Section 9.1(9)).

A supplemental indenture which changes or eliminates any covenant or other provision of this Indenture which has expressly been included solely for the benefit of one or more particular series of Securities, or which modifies the rights of the Holders of Securities of such series with respect to such covenant or other provision, shall be deemed not to affect the rights under this Indenture of the Holders of Securities of any other series. It shall not be necessary for any Act of Holders under this Section to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such Act shall approve the substance thereof.

### **Section 9.3 Execution of Supplemental Indentures.**

In executing, or accepting the additional trusts created by, any supplemental indenture permitted by this Article or the modifications thereby of the trusts created by this Indenture, the Trustee shall be entitled to receive, and (subject to Sections 6.1 and 6.3) shall be fully protected in relying upon, an Opinion of Counsel stating that the execution of such supplemental indenture is authorized or permitted by this Indenture. The Trustee may, but 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.

### **Section 9.4 Effect of Supplemental Indentures.**

Upon the execution of any supplemental indenture under this Article, this Indenture shall be modified in accordance therewith, and such supplemental indenture shall form a part of this Indenture for all purposes; and every Holder of Securities theretofore or thereafter authenticated and delivered hereunder shall be bound thereby.

### **Section 9.5 Conformity with Trust Indenture Act.**

Every supplemental indenture executed pursuant to this Article shall conform to the requirements of the Trust Indenture Act.

### **Section 9.6 Reference in Securities to Supplemental Indentures.**

Securities of any series authenticated and delivered after the execution of any supplemental indenture pursuant to this Article may, and shall if required by the Trustee, bear a notation in form approved by the Trustee as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Securities of any series so modified as to conform, in the opinion of the Trustee and the Company, to any such supplemental indenture may be prepared and executed by the Company and authenticated and delivered by the Trustee in exchange for Outstanding Securities of such series.

### **Section 9.7 Subordination Unimpaired.**

No provision in any supplemental indenture that affects the superior position of the holders of any series of Senior Debt shall be effective against holders of such series of Senior Debt without the consent of the requisite holders of such series of Senior Debt.

## **ARTICLE 10**

### **COVENANTS**

#### **Section 10.1 Payment of Principal, Premium and Interest.**

The Company covenants and agrees for the benefit of each series of Securities that it will duly and punctually pay the principal of and any premium and interest on the Securities of that series in accordance with the terms of the Securities and this Indenture.

#### **Section 10.2 Maintenance of Office or Agency.**

The Company will maintain in each Place of Payment for any series of Securities an office or agency where Securities of that series may be presented or surrendered for payment, where Securities of that series may be surrendered for registration of transfer or exchange, where Securities of that series may be surrendered for conversion and where notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be served. The Company will give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, surrenders, notices and demands. Unless otherwise provided in a supplemental indenture or pursuant to Section 3.1 hereof, the Place of Payment for any series of Securities shall be the Corporate Trust Office of the Trustee.

The Company may also from time to time designate one or more other offices or agencies where the Securities of one or more series may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency in each Place of Payment for Securities of any series for such purposes. The Company will give prompt written notice to the Trustee of any such designation or rescission and of any change in the location of any such other office or agency.

#### **Section 10.3 Money for Securities Payments to be Held in Trust.**

If the Company shall at any time act as its own Paying Agent with respect to any series of Securities, it will, on or before each due date of the principal of or any premium or interest on any of the Securities of that series, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay the principal and any premium and interest so becoming due until such sums shall be paid to such Persons or otherwise disposed of as herein provided and will promptly notify the Trustee of its action or failure so to act.

Whenever the Company shall have one or more Paying Agents for any series of Securities, it will, on or prior to each due date of the principal of or any premium or interest on any Securities of that series, deposit with a Paying Agent a sum sufficient to pay such amount, such sum to be held as provided by the Trust Indenture Act, and (unless such Paying Agent is the Trustee) the Company will promptly notify the Trustee of its action or failure so to act.

The Company will cause each Paying Agent for any series of Securities other than the Trustee to execute and deliver to the Trustee an instrument in which such Paying Agent shall agree with the Trustee, subject to the provisions of this Section, that such Paying Agent will (1) comply with the provisions of the Trust Indenture Act applicable to it as a Paying Agent and (2) during the continuance of any default by the Company (or any other obligor upon the Securities of that series) in the making of any payment in respect of the Securities of that series, upon the written request of the Trustee, forthwith pay to the Trustee all sums held in trust by such Paying Agent for payment in respect of the Securities of that series.

The Company may at any time, for the purpose of obtaining the satisfaction and discharge of this Indenture or for

any other purpose, pay, or by Company Order direct any Paying Agent to pay, to the Trustee all sums held in trust by the Company or such Paying Agent, such sums to be held by the Trustee upon the same trusts as those upon which such sums were held by the Company or such Paying Agent; and, upon such payment by any Paying Agent to the Trustee, such Paying Agent shall be released from all further liability with respect to such money.

Any money deposited with the Trustee or any Paying Agent, or then held by the Company, in trust for the payment of the principal of or any premium or interest on any Security of any series and remaining unclaimed for a period ending on the earlier of the date that is ten Business Days prior to the date such money would escheat to the State or two years after such principal, premium or interest has become due and payable shall be paid to the Company on Company Request, or (if then held by the Company) shall be discharged from such trust; and the Holder of such Security shall thereafter, as an unsecured general creditor, look only to the Company for payment thereof, and all liability of the Trustee or such Paying Agent with respect to such trust money, and all liability of the Company as trustee thereof, shall thereupon cease; provided, however, that the Trustee or such Paying Agent, before being required to make any such repayment, may at the expense of the Company cause to be published once, in a newspaper published in the English language, customarily published on each Business Day and of general circulation in each Place of Payment, notice that such money remains unclaimed and that, after a date specified therein, which shall not be less than 30 days from the date of such publication, any unclaimed balance of such money then remaining will be repaid to the Company.

#### **Section 10.4 Statement by Officers as to Default.**

The Company will deliver to the Trustee, within 120 days after the end of each fiscal year of the Company ending after the date hereof, an Officers' Certificate, stating whether or not to the best knowledge of the signers thereof the Company 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 Company shall be in default, specifying all such defaults and the nature and status thereof of which they may have knowledge. The fiscal year of the Company currently ends on December 31; and the Company will give the Trustee prompt written notice of any change of its fiscal year.

#### **Section 10.5 Existence.**

Subject to Article 8, the Company will do or cause to be done all things necessary to preserve and keep in full force and effect its existence.

#### **Section 10.6 Maintenance of Properties.**

The Company will cause all properties used or useful in the conduct of its business to be maintained and kept in good condition, repair and working order and supplied with all necessary equipment and will cause to be made all necessary repairs, renewals, replacements, betterments and improvements thereof, all as, and to the extent, in the judgment of the Company may be necessary so that the business carried on in connection therewith may be properly and advantageously conducted at all times; provided, however, that (i) the Company shall not be required to do so if the failure to do so would not have a material adverse effect on the assets, business, operations, properties or condition (financial or otherwise) of the Company and its subsidiaries, taken as a whole and (ii) nothing in this Section shall prevent the Company from discontinuing the operation or maintenance of any of such properties if such discontinuance is, in the judgment of the Company, desirable in the conduct of its business and not disadvantageous in any material respect to the Holders.

#### **Section 10.7 Payment of Taxes and Other Claims.**

The Company will pay or discharge or cause to be paid or discharged, before the same shall become delinquent, (1) all taxes, assessments and governmental charges levied or imposed upon the Company or upon the income, profits or property of the Company, and (2) all lawful claims for labor, materials and supplies which, if unpaid, might by law become a lien upon the property of the Company; provided, however, that the Company shall not be required to pay or discharge or cause to be paid or discharged any such tax, assessment, charge or claim (i) whose amount, applicability or validity is being contested in good faith by appropriate proceedings or (ii) if the failure to pay or discharge would not have a material adverse effect on the assets, business, operations, properties or condition (financial or otherwise) of the Company and its subsidiaries, taken as a whole.

## **Section 10.8 Waiver of Certain Covenants.**

Except as otherwise specified as contemplated by Section 3.1 for Securities of such series, the Company may, with respect to the Securities of any series, omit in any particular instance to comply with any term, provision or condition set forth in any covenant provided pursuant to Section 3.1(19), 9.1(2), 9.1(7), 10.6 or 10.7 for the benefit of the Holders of such series if before the time for such compliance the Holders of at least a majority in principal amount of the Outstanding Securities of such series shall, by Act of such Holders, either waive such compliance in such instance or generally waive compliance with such term, provision or condition, but no such waiver shall extend to or affect such term, provision or condition except to the extent so expressly waived, and, until such waiver shall become effective, the obligations of the Company and the duties of the Trustee in respect of any such term, provision or condition shall remain in full force and effect.

## **ARTICLE 11**

### **REDEMPTION OF SECURITIES**

#### **Section 11.1 Applicability of Article.**

Securities of any series that are redeemable before their Stated Maturity shall be redeemable in accordance with their terms and (except as otherwise specified as contemplated by Section 3.1 for such Securities) in accordance with this Article.

#### **Section 11.2 Election to Redeem; Notice to Trustee.**

The election of the Company to redeem any Securities shall be evidenced by a Board Resolution or in another manner specified as contemplated by Section 3.1 for such Securities. In case of any redemption at the election of the Company of less than all the Securities of any series (including any such redemption affecting only a single Security), the Company shall, at least 45 days prior to the Redemption Date fixed by the Company (unless a shorter notice shall be satisfactory to the Trustee), notify the Trustee of such Redemption Date, of the principal amount of Securities of such series to be redeemed and, if applicable, of the tenor of the Securities to be redeemed. In the case of any redemption of Securities prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture, the Company shall furnish the Trustee with an Officers' Certificate evidencing compliance with such restriction.

#### **Section 11.3 Selection by Trustee of Securities to Be Redeemed.**

If less than all the Securities of any series are to be redeemed (unless all the Securities of such series and of a specified tenor are to be redeemed or unless such redemption affects only a single Security), the particular Securities to be redeemed shall be selected not more than 45 days prior to the Redemption Date by the Trustee, from the Outstanding Securities of such series not previously called for redemption, by lot, or in the Trustee's discretion, on a pro-rata basis, provided that the unredeemed portion of the principal amount of any Security shall be in an authorized denomination (which shall not be less than the minimum authorized denomination) for such Security. If less than all the Securities of such series and of a specified tenor are to be redeemed (unless such redemption affects only a single Security), the particular Securities to be redeemed shall be selected not more than 45 days prior to the Redemption Date by the Trustee, from the Outstanding Securities of such series and specified tenor not previously called for redemption in accordance with the preceding sentence.

If any Security selected for partial redemption is converted in part before termination of the conversion right with respect to the portion of the Security so selected, the converted portion of such Security shall be deemed (so far as may be) to be the portion selected for redemption. Securities that have been converted during a selection of Securities to be redeemed shall be treated by the Trustee as Outstanding for the purpose of such selection.

The Trustee shall promptly notify the Company in writing of the Securities selected for redemption as aforesaid and, in case of any Securities selected for partial redemption as aforesaid, the principal amount thereof to be redeemed.

The provisions of the two preceding paragraphs shall not apply with respect to any redemption affecting only a single Security, whether such Security is to be redeemed in whole or in part. In the case of any such redemption in part, the unredeemed portion of the principal amount of the Security shall be in an authorized denomination (which shall not be less than the minimum authorized denomination) for such Security.

For all purposes of this Indenture, unless the context otherwise requires, all provisions relating to the redemption of Securities shall relate, in the case of any Securities redeemed or to be redeemed only in part, to the portion of the principal amount of such Securities which has been or is to be redeemed.

#### **Section 11.4 Notice of Redemption.**

Notice of redemption shall be given by first-class mail, postage prepaid, mailed not fewer than 30 nor more than 60 days prior to the Redemption Date, unless a shorter period is specified in the Securities to be redeemed, to each Holder of Securities to be redeemed, at its address appearing in the Security Register.

All notices of redemption shall state:

- (1) the Redemption Date,
- (2) the Redemption Price (including accrued interest, if any),
- (3) if less than all the Outstanding Securities of any series consisting of more than a single Security are to be redeemed, the identification (and, in the case of partial redemption of any such Securities, the principal amounts) of the particular Securities to be redeemed and, if less than all the Outstanding Securities of any series consisting of a single Security are to be redeemed, the principal amount of the particular Security to be redeemed,
- (4) in case any Security is to be redeemed in part only, that on and after the Redemption Date, upon surrender of such Security, the Holder of such Security will receive, without charge, a new Security or Securities of authorized denominations for the principal amount thereof remaining unredeemed,
- (5) that on the Redemption Date the Redemption Price will become due and payable upon each such Security to be redeemed and, if applicable, that interest thereon will cease to accrue on and after said date,
- (6) the place or places where each such Security is to be surrendered for payment of the Redemption Price,
- (7) if applicable, the conversion price or conversion rate, as the case may be, the date on which the right to convert the principal of the Securities or the portions thereof to be redeemed will terminate, and the place or places where such Securities may be surrendered for conversion,
- (8) that the redemption is for a sinking fund, if such is the case, and
- (9) the CUSIP number or numbers and/or common codes of the Security being redeemed.

Notice of redemption of Securities to be redeemed at the election of the Company shall be given by the Company or, at the Company's request, by the Trustee in the name and at the expense of the Company and shall be irrevocable.

#### **Section 11.5 Deposit of Redemption Price.**

On or prior to any Redemption Date, the Company shall deposit with the Trustee or with a Paying Agent (or, if the Company is acting as its own Paying Agent, segregate and hold in trust as provided in Section 10.3) an amount of money sufficient to pay the Redemption Price of, and (except if the Redemption Date shall be an Interest Payment Date) accrued interest on, all the Securities which are to be redeemed on that date.

If any Security called for redemption is converted, any money deposited with the Trustee or with a Paying Agent or so segregated and held in trust for the redemption of such Security shall (subject to the right of any Holder of such Security to receive interest as provided in the last paragraph of Section 3.7) be paid to the Company on Company Request, or if then held by the Company, shall be discharged from such trust.

#### **Section 11.6 Securities Payable on Redemption Date.**

Notice of redemption having been given as aforesaid, the Securities so to be redeemed shall, on the Redemption



Date, become due and payable at the Redemption Price therein specified, and from and after such date (unless the Company shall default in the payment of the Redemption Price and accrued interest) such Securities shall cease to bear interest. Upon surrender of any such Security for redemption in accordance with said notice, such Security shall be paid by the Company at the Redemption Price, together with accrued interest to the Redemption Date; provided, however, that, unless otherwise specified as contemplated by Section 3.1, installments of interest whose Stated Maturity is on or prior to the Redemption Date will be payable to the Holders of such Securities, or one or more Predecessor Securities, registered as such at the close of business on the relevant Record Dates according to their terms and the provisions of Section 3.7.

If any Security called for redemption shall not be so paid upon surrender thereof for redemption, the principal and any premium shall, until paid, bear interest from the Redemption Date at the rate prescribed therefor in the Security.

#### **Section 11.7 Securities Redeemed in Part.**

Any Security which is to be redeemed only in part shall be surrendered at a Place of Payment therefor (with, if the Company or the Trustee so requires, due endorsement by, or a written instrument of transfer in form satisfactory to the Company and the Trustee duly executed by, the Holder thereof or its attorney duly authorized in writing), and the Company shall execute, and the Trustee shall authenticate and deliver to the Holder of such Security without service charge, a new Security or Securities of the same series and of like tenor, of any authorized denomination as requested by such Holder, in aggregate principal amount equal to and in exchange for the unredeemed portion of the principal of the Security so surrendered.

### **ARTICLE 12**

#### **SINKING FUNDS**

##### **Section 12.1 Applicability of Article.**

The provisions of this Article shall be applicable to any sinking fund for the retirement of Securities of any series except as otherwise specified as contemplated by Section 3.1 for such Securities.

The minimum amount of any sinking fund payment provided for by the terms of any Securities 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 such Securities is herein referred to as an “optional sinking fund payment.” If provided for by the terms of any Securities, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 12.2. Each sinking fund payment shall be applied to the redemption of Securities as provided for by the terms of such Securities.

##### **Section 12.2 Satisfaction of Sinking Fund Payments with Securities.**

The Company (1) may deliver Outstanding Securities of a series (other than any previously called for redemption) and (2) may apply as a credit Securities of a series which have been redeemed either at the election of the Company pursuant to the terms of such Securities or through the application of permitted optional sinking fund payments pursuant to the terms of such Securities, in each case in satisfaction of all or any part of any sinking fund payment with respect to any Securities of such series required to be made pursuant to the terms of such Securities as and to the extent provided for by the terms of such Securities; provided that the Securities to be so credited have not been previously so credited. The Securities to be so credited shall be received and credited for such purpose by the Trustee at the Redemption Price, as specified in the Securities so to be redeemed, for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly.

##### **Section 12.3 Redemption of Securities for Sinking Fund.**

Not fewer than 60 days prior to each sinking fund payment date for any Securities, the Company will deliver to the Trustee an Officers’ Certificate specifying the amount of the next ensuing sinking fund payment for such Securities pursuant to the terms of such Securities, the portion thereof, if any, which is to be satisfied by payment of cash and the portion thereof, if any, which is to be satisfied by delivering and crediting Securities pursuant to Section 12.2 and will also deliver to the Trustee any Securities to be so delivered. Not fewer than 30 days prior to each such sinking fund payment date, the Trustee shall select the Securities to be redeemed upon such sinking fund payment date in the manner specified in Section 11.3 and cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided

in Section 11.4. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Sections 11.6 and 11.7.

## **ARTICLE 13**

### **DEFEASANCE AND COVENANT DEFEASANCE**

#### **Section 13.1 Company's Option to Effect Defeasance or Covenant Defeasance.**

The Company may elect, at its option at any time, to have Section 13.2 or Section 13.3 applied to any Securities or any series of Securities, as the case may be, designated pursuant to Section 3.1 as being defeasible pursuant to such Section 13.2 or 13.3, in accordance with any applicable requirements provided pursuant to Section 3.1 and upon compliance with the conditions set forth below in this Article. Any such election shall be evidenced by a Board Resolution or in another manner specified as contemplated by Section 3.1 for such Securities.

#### **Section 13.2 Defeasance and Discharge.**

Upon the Company's exercise of its option (if any) to have this Section applied to any Securities or any series of Securities, as the case may be, the Company shall be deemed to have been discharged from its obligations, and the provisions of Article 15 shall cease to be effective, with respect to such Securities as provided in this Section on and after the date the conditions set forth in Section 13.4 are satisfied (hereinafter called "Defeasance"). For this purpose, such Defeasance means that the Company shall be deemed to have paid and discharged the entire indebtedness represented by such Securities and to have satisfied all its other obligations under such Securities and this Indenture insofar as such Securities are concerned (and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging the same), subject to the following which shall survive until otherwise terminated or discharged hereunder:

- (1) the rights of Holders of such Securities to receive, solely from the trust fund described in Section 13.4 and as more fully set forth in such Section, payments in respect of the principal of and any premium and interest on such Securities when payments are due,
- (2) the Company's obligations with respect to such Securities under Sections 3.4, 3.5, 3.6, 10.2 and 10.3, and, if applicable, Article 14,
- (3) the rights, powers, trusts, duties and immunities of the Trustee hereunder, and
- (4) this Article.

Subject to compliance with this Article, the Company may exercise its option (if any) to have this Section applied to any Securities notwithstanding the prior exercise of its option (if any) to have Section 13.3 applied to such Securities.

#### **Section 13.3 Covenant Defeasance.**

Upon the Company's exercise of its option (if any) to have this Section applied to any Securities or any series of Securities, as the case may be,

- (1) the Company shall be released from its obligations under Sections 10.6 and 10.7 and any covenants provided pursuant to Sections 3.1(19), 9.1(2) or 9.1(7) for the benefit of the Holders of such Securities,
- (2) the occurrence of any event specified in Sections 5.1(4) (with respect to any of Sections 10.6 and 10.7 and any such covenants provided pursuant to Section 3.1(19), 9.1(2) or 9.1(7)) and the occurrence of any Event of Default specified pursuant to Section 3.1, shall be deemed not to be or result in an Event of Default, and
- (3) the provisions of Article 15 shall cease to be effective,

in each case with respect to such Securities or series of Securities as provided in this Section on and after the date the conditions set forth in Section 13.4 are satisfied (hereinafter called "Covenant Defeasance"). For this purpose, such Covenant Defeasance means that, with respect to such Securities, the Company may omit to comply with and shall have no liability in

respect of any term, condition or limitation set forth in any such specified Section (to the extent so specified in the case of Section 5.1(4) and the occurrence of any Event of Default specified pursuant to Section 3.1) or Article 15, whether directly or indirectly by reason of any reference elsewhere herein to any such Section or Article or by reason of any reference in any such Section or Article to any other provision herein or in any other document, but the remainder of this Indenture and such Securities shall be unaffected thereby.

#### **Section 13.4 Conditions to Defeasance or Covenant Defeasance.**

The following shall be the conditions to the application of Section 13.2 or Section 13.3 to any Securities or any series of Securities, as the case may be:

(1) The Company shall irrevocably have deposited or caused to be deposited with the Trustee (or another trustee which satisfies the requirements contemplated by Section 6.9 and agrees to comply with the provisions of this Article applicable to it) as trust funds in trust for the purpose of making the following payments, specifically pledged as security for, and dedicated solely to, the benefits of the Holders of such Securities,

(A) in the case of Securities of a series denominated in currency of the United States of America,

(i) cash in currency of the United States of America in an amount, or

(ii) U.S. Government Obligations which through the scheduled payment of principal and interest in respect thereof in accordance with their terms will provide, not later than one day before the due date of any payment, an amount in cash, or

(iii) a combination thereof, or

(B) in the case of Securities of a series denominated in currency other than that of the United States of America,

(i) cash in the currency in which such series of Securities is denominated in an amount, or

(ii) Foreign Government Obligations which through the scheduled payment of principal and interest in respect thereof in accordance with their terms will provide, not later than one day before the due date of any payment, an amount in cash, or

(iii) a combination thereof,

in each case sufficient, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay and discharge, and which shall be applied by the Trustee (or any such other qualifying trustee) to pay and discharge, the principal of and any premium and interest on such Securities on the respective Stated Maturities, in accordance with the terms of this Indenture and such Securities.

(2) In the event of an election to have Section 13.2 apply to any Securities or any series of Securities, as the case may be, the Company shall have delivered to the Trustee an Opinion of Counsel stating that

(A) the Company 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, and

(C) 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 amount, in the same manner and at the same times as would be the case if such deposit, Defeasance and discharge were not to occur.

(3) In the event of an election to have Section 13.3 apply to any Securities or any series of Securities, as the case may be, the Company 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.

(4) The Company shall have delivered to the Trustee an Officers' Certificate to the effect that neither such Securities nor any other Securities of the same series, if then listed on any securities exchange, will be delisted as a result of such deposit.

(5) No event which is, or after notice or lapse of time or both would become, an Event of Default with respect to such Securities or any other Securities shall have occurred and be continuing at the time of such deposit or, with regard to any such event specified in Sections 5.1(5) and (6), at any time on or prior to the 90th day after the date of such deposit (it being understood that this condition shall not be deemed satisfied until after such 90th day).

(6) Such Defeasance or Covenant Defeasance shall not cause the Trustee to have a conflicting interest within the meaning of the Trust Indenture Act (assuming all Securities are in default within the meaning of such Act).

(7) Such Defeasance or Covenant Defeasance shall not result in a breach or violation of, or constitute a default under, this Indenture or any other agreement or instrument to which the Company is a party or by which it is bound.

(8) Such Defeasance or Covenant Defeasance shall not result in the trust arising from such deposit constituting an investment company within the meaning of the Investment Company Act unless such trust shall be registered under such Act or exempt from registration thereunder.

(9) At the time of such deposit,

(A) no default in the payment of any principal of or premium or interest on any Senior Debt shall have occurred and be continuing,

(B) no event of default with respect to any Senior Debt shall have resulted in such Senior Debt becoming, and continuing to be, due and payable prior to the date on which it would otherwise have become due and payable (unless payment of such Senior Debt has been made or duly provided for), and

(C) no other event of default with respect to any Senior Debt shall have occurred and be continuing permitting (after notice or lapse of time or both) the holders of such Senior Debt (or a Representative on behalf of such holders) to declare such Senior Debt due and payable prior to the date on which it would otherwise have become due and payable.

(10) The Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent with respect to such Defeasance or Covenant Defeasance have been complied with.

#### **Section 13.5 Deposited Money, U.S. Government Obligations and Foreign Government Obligations to be Held in Trust; Miscellaneous Provisions.**

Subject to the provisions of the last paragraph of Section 10.3, all money, U.S. Government Obligations and Foreign Government Obligations (including the proceeds thereof) deposited with the Trustee or other qualifying trustee (solely for purposes of this Section and Section 13.6, the Trustee and any such other trustee are referred to collectively as the "Trustee") pursuant to Section 13.4 in respect of any Securities shall be held in trust and applied by the Trustee, in accordance with the provisions of such Securities and this Indenture, to the payment, either directly or through any such Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the Holders of such Securities, of all sums due and to become due thereon in respect of principal and any premium and interest, but money so held in trust need not be segregated from other funds except to the extent required by law. Money, U.S. Government Obligations and Foreign

The Company 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 13.4 or the principal and interest received in respect thereof other than any such tax, fee or other charge which by law is for the account of the Holders of Outstanding Securities.

Anything in this Article to the contrary notwithstanding, the Trustee shall deliver or pay to the Company from time to time upon Company Request any money, U.S. Government Obligations or Foreign Government Obligations held by it as provided in Section 13.4 with respect to any Securities which, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, are in excess of the amount thereof which would then be required to be deposited to effect the Defeasance or Covenant Defeasance, as the case may be, with respect to such Securities.

#### **Section 13.6 Reinstatement.**

If the Trustee or the Paying Agent is unable to apply any money in accordance with this Article with respect to any Securities by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, then the obligations under this Indenture and such Securities from which the Company has been discharged or released pursuant to Section 13.2 or 13.3 shall be revived and reinstated as though no deposit had occurred pursuant to this Article with respect to such Securities, until such time as the Trustee or Paying Agent is permitted to apply all money held in trust pursuant to Section 13.5 with respect to such Securities in accordance with this Article; provided, however, that if the Company makes any payment of principal of or any premium or interest on any such Security following such reinstatement of its obligations, the Company shall be subrogated to the rights (if any) of the Holders of such Securities to receive such payment from the money so held in trust.

### **ARTICLE 14**

#### **CONVERSION OF SECURITIES**

##### **Section 14.1 Applicability of Article.**

The provisions of this Article shall be applicable to the Securities of any series which are convertible into shares of Common Stock of the Company, and the issuance of such shares of Common Stock upon the conversion of such Securities, except as otherwise specified as contemplated by Section 3.1 for the Securities of such series.

##### **Section 14.2 Exercise of Conversion Privilege.**

In order to exercise a conversion privilege, the Holder of a Security of a series with such a privilege shall surrender such Security to the Company at the office or agency maintained for that purpose pursuant to Section 10.2, accompanied by a duly executed conversion notice to the Company substantially in the form set forth in Section 2.6 stating that the Holder elects to convert such Security or a specified portion thereof. Such notice shall also state, if different from the name and address of such Holder, the name or names (with address) in which the certificate or certificates for shares of Common Stock, which shall be issuable on such conversion, shall be issued. Securities surrendered for conversion shall (if so required by the Company or the Trustee) be duly endorsed by or accompanied by instruments of transfer in forms satisfactory to the Company and the Trustee duly executed by the Holder or its attorney duly authorized in writing; and Securities so surrendered for conversion (in whole or in part) during the period from the close of business on any Regular Record Date to the opening of business on the next succeeding Interest Payment Date (excluding Securities or portions thereof called for redemption during the period beginning at the close of business on a Regular Record Date and ending at the opening of business on the first Business Day after the next succeeding Interest Payment Date, or if such Interest Payment Date is not a Business Day, the second such Business Day) shall also be accompanied by payment in funds acceptable to the Company of an amount equal to the interest payable on such Interest Payment Date on the principal amount of such Security then being converted, and such interest shall be payable to such Holder notwithstanding the conversion of such Security, subject to the provisions of Section 3.7 relating to the payment of Defaulted Interest by the Company. As promptly as practicable after the receipt of such notice and of any payment required pursuant to a Board Resolution and, subject to Section 3.3, set forth, or determined in the manner provided, in an Officers' Certificate, or established in one or more indentures supplemental hereto setting forth the terms of such series of Security, and the surrender of such Security in accordance with such reasonable

regulations as the Company may prescribe, the Company shall issue and shall deliver, at the office or agency at which such Security is surrendered, to such Holder or on its written order, a certificate or certificates for the number of full shares of Common Stock issuable upon the conversion of such Security (or specified portion thereof), in accordance with the provisions of such Board Resolution, Officers' Certificate or supplemental indenture, and cash as provided therein in respect of any fractional share of such Common Stock otherwise issuable upon such conversion. Such conversion shall be deemed to have been effected immediately prior to the close of business on the date on which such notice and such payment, if required, shall have been received in proper order for conversion by the Company and such Security shall have been surrendered as aforesaid (unless such Holder shall have so surrendered such Security and shall have instructed the Company to effect the conversion on a particular date following such surrender and such Holder shall be entitled to convert such Security on such date, in which case such conversion shall be deemed to be effected immediately prior to the close of business on such date) and at such time the rights of the Holder of such Security as such Security Holder shall cease and the Person or Persons in whose name or names any certificate or certificates for shares of Common Stock of the Company shall be issuable upon such conversion shall be deemed to have become the Holder or Holders of record of the shares represented thereby. Except as set forth above and subject to the final paragraph of Section 3.7, no payment or adjustment shall be made upon any conversion on account of any interest accrued on the Securities (or any part thereof) surrendered for conversion or on account of any dividends on the Common Stock of the Company issued upon such conversion.

In the case of any Security which is converted in part only, upon such conversion the Company shall execute and the Trustee shall authenticate and deliver to or on the order of the Holder thereof, at the expense of the Company, a new Security or Securities of the same series, of authorized denominations, in aggregate principal amount equal to the unconverted portion of such Security.

#### **Section 14.3 No Fractional Shares.**

No fractional share of Common Stock of the Company shall be issued upon conversions of Securities of any series. If more than one Security shall be surrendered for conversion at one time by the same Holder, the number of full shares which shall be issuable upon conversion shall be computed on the basis of the aggregate principal amount of the Securities (or specified portions thereof to the extent permitted hereby) so surrendered. If, except for the provisions of this Section 14.3, any Holder of a Security or Securities would be entitled to a fractional share of Common Stock of the Company upon the conversion of such Security or Securities, or specified portions thereof, the Company shall pay to such Holder an amount in cash equal to the current market value of such fractional share computed, (i) if such Common Stock is listed or admitted to unlisted trading privileges on a national securities exchange or market, on the basis of the last reported sale price regular way on such exchange or market on the last trading day prior to the date of conversion upon which such a sale shall have been effected, or (ii) if such Common Stock is not at the time so listed or admitted to unlisted trading privileges on a national securities exchange or market, on the basis of the average of the bid and asked prices of such Common Stock in the over-the-counter market, on the last trading day prior to the date of conversion, as reported by the National Quotation Bureau, Incorporated or similar organization if the National Quotation Bureau, Incorporated is no longer reporting such information, or if not so available, the fair market price as determined by the Board of Directors. For purposes of this Section, "trading day" shall mean each Monday, Tuesday, Wednesday, Thursday and Friday other than any day on which the Common Stock is not traded on the Nasdaq Global Market, or if the Common Stock is not traded on the Nasdaq Global Market, on the principal exchange or market on which the Common Stock is traded or quoted.

#### **Section 14.4 Adjustment of Conversion Price or Conversion Rate.**

The conversion price or conversion rate, as the case may be, of Securities of any series that is convertible into Common Stock of the Company shall be adjusted for any stock dividends, stock splits, reclassifications, combinations or similar transactions in accordance with the terms of the supplemental indenture or Board Resolutions setting forth the terms of the Securities of such series.

Whenever the conversion price or conversion rate, as the case may be, is adjusted, the Company shall compute the adjusted conversion price or conversion rate, as the case may be, in accordance with terms of the applicable Board Resolution or supplemental indenture and shall prepare an Officers' Certificate setting forth the adjusted conversion price or conversion rate, as the case may be, and showing in reasonable detail the facts upon which such adjustment is based, and such certificate shall forthwith be filed at each office or agency maintained for the purpose of conversion of Securities pursuant to Section 10.2 and, if different, with the Trustee. The Company shall forthwith cause a notice setting forth the adjusted conversion price or conversion rate, as the case may be, to be mailed, first class postage prepaid, to each Holder of Securities of such series at its address appearing on the Security Register and to any conversion agent other than the Trustee.

#### **Section 14.5 Notice of Certain Corporate Actions.**

In case:

- (1) the Company shall declare a dividend (or any other distribution) on its Common Stock payable otherwise than in cash out of its retained earnings (other than a dividend for which approval of any shareholders of the Company is required) that would require an adjustment pursuant to Section 14.4; or
- (2) the Company shall authorize the granting to all or substantially all of the holders of its Common Stock of rights, options or warrants to subscribe for or purchase any shares of capital stock of any class or of any other rights (other than any such grant for which approval of any shareholders of the Company is required); or
- (3) of any reclassification of the Common Stock of the Company (other than a subdivision or combination of its outstanding shares of Common Stock, or of any consolidation, merger or share exchange to which the Company is a party and for which approval of any shareholders of the Company is required), or of the sale of all or substantially all of the assets of the Company; or
- (4) of the voluntary or involuntary dissolution, liquidation or winding up of the Company;

then the Company shall cause to be filed with the Trustee, and shall cause to be mailed to all Holders at their last addresses as they shall appear in the Security Register, at least 20 days (or 10 days in any case specified in clause (1) or (2) above) prior to the applicable record date hereinafter specified, a notice stating (i) the date on which a record is to be taken for the purpose of such dividend, distribution, rights, options or warrants, or, if a record is not to be taken, the date as of which the holders of Common Stock of record to be entitled to such dividend, distribution, rights, options or warrants are to be determined, or (ii) the date on which such reclassification, consolidation, merger, share exchange, sale, dissolution, liquidation or winding up is expected to become effective, and the date as of which it is expected that holders of Common Stock of record shall be entitled to exchange their shares of Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, share exchange, sale, dissolution, liquidation or winding up. If at any time the Trustee shall not be the conversion agent, a copy of such notice shall also forthwith be filed by the Company with the Trustee.

#### **Section 14.6 Reservation of Shares of Common Stock.**

The Company shall at all times reserve and keep available, free from preemptive rights, out of its authorized but unissued Common Stock, for the purpose of effecting the conversion of Securities, the full number of shares of Common Stock of the Company then issuable upon the conversion of all outstanding Securities of any series that has conversion rights.

#### **Section 14.7 Payment of Certain Taxes upon Conversion.**

Except as provided in the next sentence, the Company will pay any and all taxes that may be payable in respect of the issue or delivery of shares of its Common Stock on conversion of Securities pursuant hereto. The Company shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issue and delivery of shares of its Common Stock in a name other than that of the Holder of the Security or Securities to be converted, and no such issue or delivery shall be made unless and until the Person requesting such issue has paid to the Company the amount of any such tax, or has established, to the satisfaction of the Company, that such tax has been paid.

#### **Section 14.8 Nonassessability.**

The Company covenants that all shares of its Common Stock that may be issued upon conversion of Securities will upon issue in accordance with the terms hereof be duly and validly issued and fully paid and nonassessable.

#### **Section 14.9 Provision in Case of Consolidation, Merger or Sale of Assets.**

In case of any consolidation or merger of the Company with or into any other Person, any merger of another Person with or into the Company (other than a merger which does not result in any reclassification, conversion, exchange or cancellation of outstanding shares of Common Stock of the Company) or any conveyance, sale, transfer or lease of all or substantially all of the assets of the Company, the Person formed by such consolidation or resulting from such merger or which acquires such assets, as the case may be, shall execute and deliver to the Trustee a supplemental indenture providing

that the Holder of each Security of a series then Outstanding that is convertible into Common Stock of the Company shall have the right thereafter (which right shall be the exclusive conversion right thereafter available to said Holder), during the period such Security shall be convertible, to convert such Security only into the kind and amount of securities, cash and other property receivable upon such consolidation, merger, conveyance, sale, transfer or lease by a holder of the number of shares of Common Stock of the Company into which such Security might have been converted immediately prior to such consolidation, merger, conveyance, sale, transfer or lease, assuming such holder of Common Stock of the Company (i) is not a Person with which the Company consolidated or merged with or into or which merged into or with the Company or to which such conveyance, sale, transfer or lease was made, as the case may be (a "Constituent Person"), or an Affiliate of a Constituent Person and (ii) failed to exercise such holder's rights of election, if any, as to the kind or amount of securities, cash and other property receivable upon such consolidation, merger, conveyance, sale, transfer or lease (provided that if the kind or amount of securities, cash and other property receivable upon such consolidation, merger, conveyance, sale, transfer, or lease is not the same for each share of Common Stock of the Company held immediately prior to such consolidation, merger, conveyance, sale, transfer or lease by others than a Constituent Person or an Affiliate thereof and in respect of which such rights of election shall not have been exercised ("Non-electing Share"), then for the purpose of this Section 14.9 the kind and amount of securities, cash and other property receivable upon such consolidation, merger, conveyance, sale, transfer or lease by the holders of each Non-electing Share shall be deemed to be the kind and amount so receivable per share by a plurality of the Non-electing Shares). Such supplemental indenture shall provide for adjustments which, for events subsequent to the effective date of such supplemental indenture, shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article or in accordance with the terms of the supplemental indenture or Board Resolutions setting forth the terms of such adjustments. The above provisions of this Section 14.9 shall similarly apply to successive consolidations, mergers, conveyances, sales, transfers or leases. Notice of the execution of such a supplemental indenture shall be given by the Company to the Holder of each Security of a series that is convertible into Common Stock of the Company as provided in Section 1.6 promptly upon such execution.

Neither the Trustee nor any conversion agent, if any, shall be under any responsibility to determine the correctness of any provisions contained in any such supplemental indenture relating either to the kind or amount of shares of stock or other securities or property or cash receivable by Holders of Securities of a series convertible into Common Stock of the Company upon the conversion of their Securities after any such consolidation, merger, conveyance, transfer, sale or lease or to any such adjustment, but may accept as conclusive evidence of the correctness of any such provisions, and shall be protected in relying upon, an Opinion of Counsel with respect thereto, which the Company shall cause to be furnished to the Trustee upon request.

#### **Section 14.10 Duties of Trustee Regarding Conversion.**

Neither the Trustee nor any conversion agent shall at any time be under any duty or responsibility to any Holder of Securities of any series that is convertible into Common Stock of the Company to determine whether any facts exist which may require any adjustment of the conversion price or conversion rate, as the case may be, or with respect to the nature or extent of any such adjustment when made, or with respect to the method employed, whether herein or in any supplemental indenture, any resolutions of the Board of Directors or written instrument executed by one or more officers of the Company provided to be employed in making the same. Neither the Trustee nor any conversion agent shall be accountable with respect to the validity or value (or the kind or amount) of any shares of Common Stock of the Company, or of any securities or property, which may at any time be issued or delivered upon the conversion of any Securities and neither the Trustee nor any conversion agent makes any representation with respect thereto. Subject to the provisions of Section 6.1, neither the Trustee nor any conversion agent shall be responsible for any failure of the Company to issue, transfer or deliver any shares of its Common Stock or stock certificates or other securities or property upon the surrender of any Security for the purpose of conversion or to comply with any of the covenants of the Company contained in this Article 14 or in the applicable supplemental indenture, resolutions of the Board of Directors or written instrument executed by one or more duly authorized officers of the Company.

#### **Section 14.11 Repayment of Certain Funds upon Conversion.**

Any funds which at any time shall have been deposited by the Company or on its behalf with the Trustee or any other paying agent for the purpose of paying the principal of, and premium, if any, and interest, if any, on any of the Securities (including, but not limited to, funds deposited for the sinking fund referred to in Article 12 hereof and funds deposited pursuant to Article 13 hereof) and which shall not be required for such purposes because of the conversion of such Securities as provided in this Article 14 shall after such conversion be repaid to the Company by the Trustee upon the Company's written request.



## SUBORDINATION OF SECURITIES

**Section 15.1 Agreement of Subordination.**

Except as otherwise provided in a supplemental indenture or pursuant to Section 3.1, the Company 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 15; and each Person holding any Security, whether upon original issue or upon transfer, assignment or exchange thereof, accepts and agrees to be bound by such provisions.

The payment of the principal of, premium, if any, and interest on all Securities (including, but not limited to, the redemption price with respect to the Securities called for redemption in accordance with Article 11 as provided in the Indenture) issued hereunder shall, to the extent and in the manner hereinafter set forth, be subordinated and subject in right of payment to the prior payment in full of all Senior Debt, whether outstanding at the date of this Indenture or thereafter incurred.

No provision of this Article 15 shall prevent the occurrence of any default or Event of Default hereunder.

**Section 15.2 Payments to Holders.**

No payment shall be made with respect to the principal of, or premium, if any, or interest on the Securities (including, but not limited to, the redemption price with respect to the Securities to be called for redemption in accordance with Article 11 as provided in the Indenture), except payments and distributions made by the Trustee as permitted by the first or second paragraph of Section 15.5, if:

(i) a default in the payment of principal, premium, if any, interest, rent or other obligations due on any Senior Debt occurs and is continuing (or, in the case of Senior Debt for which there is a period of grace, in the event of such a default that continues beyond the period of grace, if any, specified in the instrument or lease evidencing such Senior Debt) (a "Payment Default"), unless and until such default shall have been cured or waived or shall have ceased to exist; or

(ii) a default, other than a Payment Default, on any Designated Senior Debt occurs and is continuing that then permits the requisite holders of such Designated Senior Debt (or a Representative of such Designated Senior Debt) to accelerate its maturity and the Trustee receives a notice of such default (a "Payment Blockage Notice") from a holder of Designated Senior Debt, a Representative of such Designated Senior Debt or the Company (a "Non-Payment Default").

If the Trustee receives any Payment Blockage Notice pursuant to clause (ii) above, no subsequent Payment Blockage Notice shall be effective for purposes of this Section unless and until at least 365 days shall have elapsed since the initial effectiveness of the immediately prior Payment Blockage Notice. No Non-Payment Default that existed or was continuing on the date of delivery of any Payment Blockage Notice to the Trustee shall be, or be made, the basis for a subsequent Payment Blockage Notice.

The Company may and shall resume payments on and distributions in respect of the Securities upon the earlier of:

(1) in the case of any Payment Default, the date upon which the Payment Default is cured or waived or ceases to exist, or

(2) in the case of a Non-Payment Default, the earlier of (a) the date upon which such Non-Payment Default is cured, waived or ceases to exist or (b) 179 days after the date on which the applicable Payment Blockage Notice is received by the Trustee,

unless this Article 15 otherwise prohibits the payment or distribution at such time.

Upon any payment or distribution of assets of the Company of any kind or character, whether in cash, property or securities, to creditors upon any dissolution or winding-up or liquidation or reorganization of the Company, whether

voluntary or involuntary or in bankruptcy, insolvency, reorganization, liquidation, receivership or other proceedings, or upon an assignment for the benefit of creditors or any marshalling of the assets and liabilities of the Company, or otherwise, all amounts due or to become due upon all Senior Debt shall first be paid in full in cash or other payment satisfactory to the holders of such Senior Debt, or payment thereof in accordance with its terms provided for in cash or other payment satisfactory to the holders of such Senior Debt, before any payment is made on account of the principal of, premium, if any, or interest on the Securities (except payments made pursuant to Article 4 from monies deposited with the Trustee pursuant thereto prior to commencement of proceedings for such dissolution, winding-up, liquidation, reorganization, assignment for the benefit of creditors or the marshalling of assets and liabilities of the Company); and upon any such dissolution, winding-up, liquidation, reorganization, assignment for the benefit of creditors or marshalling of assets and liabilities of the Company or bankruptcy, insolvency, receivership or other proceeding, any payment by the Company, or distribution of assets of the Company of any kind or character, whether in cash, property or securities, to which the Holders of the Securities or the Trustee would be entitled, except for the provision of this Article 15, shall (except as aforesaid) be paid by the Company or by any receiver, trustee in bankruptcy, liquidating trustee, agent or other Person making such payment or distribution, or by the Holders of the Securities or by the Trustee under this Indenture if received by them or it, directly to the holders of Senior Debt (pro rata to such holders on the basis of the respective amounts of Senior Debt held by such holders, or as otherwise required by law or a court order) or their Representative or Representatives, or to the Representative under any indenture or other debt instrument pursuant to which any instruments evidencing any Senior Debt may have been issued, as their respective interests may appear, to the extent necessary to pay all Senior Debt in full, in cash or other payment satisfactory to the holders of such Senior Debt, after giving effect to any concurrent payment or distribution to or for the holders of Senior Debt, before any payment or distribution or provision therefor is made to the Holders of the Securities or to the Trustee.

For purposes of this Article 15, the words, “cash, property or securities” shall not be deemed to include shares of stock of the Company as reorganized or readjusted, or securities of the Company or any other corporation provided for by a plan of reorganization or readjustment, the payment of which is subordinated at least to the extent provided in this Article 15 with respect to the Securities to the payment of all Senior Debt which may at the time be outstanding; provided that (i) the Senior Debt is assumed by the new corporation, if any, resulting from any reorganization or readjustment, and (ii) the rights of the holders of Senior Debt (other than leases which are not assumed by the Company or the new corporation, as the case may be) are not, without the consent of such holders, altered by such reorganization or readjustment. The consolidation of the Company with, or the merger of the Company into, another corporation or the liquidation or dissolution of the Company following the conveyance or transfer of its property as an entirety, or substantially as an entirety, to another corporation upon the terms and conditions provided for in Article 8 shall not be deemed a dissolution, winding-up, liquidation or reorganization for the purposes of this Section 15.2 if such other corporation shall, as a part of such consolidation, merger, conveyance or transfer, comply with the conditions stated in Article 8.

In the event of the acceleration of the Securities because of an Event of Default, no payment or distribution shall be made to the Trustee or any Holder of Securities in respect of the principal of, premium, if any, or interest on the Securities (including, but not limited to, the redemption price with respect to the Securities called for redemption in accordance with Article 11 as provided in the Indenture), except payments and distributions made by the Trustee as permitted by the first or second paragraph of Section 15.5, until all Senior Debt has been paid in full in cash or other payment satisfactory to the holders of Senior Debt or such acceleration is rescinded in accordance with the terms of this Indenture. If payment of the Securities is accelerated because of an Event of Default, the Company shall promptly notify holders of Senior Debt of the acceleration.

In the event that, notwithstanding the foregoing provisions, any payment or distribution of assets of the Company of any kind or character, whether in cash, property or securities (including, without limitation, by way of setoff or otherwise), prohibited by the foregoing, shall be received by the Trustee or the Holders of the Securities before all Senior Debt is paid in full in cash or other payment satisfactory to the holders of such Senior Debt, or provision is made for such payment thereof in accordance with its terms in cash or other payment satisfactory to the holders of such Senior Debt, 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 Debt or their Representative or Representatives, or to the Representative under any indenture or other debt instrument pursuant to which any instruments evidencing any Senior Debt may have been issued, as their respective interests may appear, as calculated by the Company, for application to the payment of all Senior Debt remaining unpaid to the extent necessary to pay all Senior Debt in full in cash or other payment satisfactory to the holders of such Senior Debt, after giving effect to any concurrent payment or distribution to or for the holders of such Senior Debt.

Nothing in this Section 15.2 shall apply to claims of, or payments to, the Trustee under or pursuant to Section 6.7. This Section 15.2 shall be subject to the further provisions of Section 15.5.

### **Section 15.3 Subrogation of Securities.**

Subject to the payment in full of all Senior Debt, the rights of the Holders of the Securities shall be subrogated to the extent of the payments or distributions made to the holders of such Senior Debt pursuant to the provisions of this Article 15 (equally and ratably with the holders of all indebtedness of the Company which by its express terms is subordinated to other indebtedness of the Company to substantially the same extent as the Securities are subordinated and is entitled to like rights of subrogation) to the rights of the holders of Senior Debt to receive payments or distributions of cash, property or securities of the Company applicable to the Senior Debt until the principal, premium, if any, and interest on the Securities shall be paid in full; and, for the purposes of such subrogation, no payments or distributions to the holders of the Senior Debt 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 15, and no payment over pursuant to the provisions of this Article 15, to or for the benefit of the holders of Senior Debt by Holders of the Securities or the Trustee, shall, as between the Company, its creditors other than holders of Senior Debt, and the Holders of the Securities, be deemed to be a payment by the Company to or on account of the Senior Debt; and no payments or distributions of cash, property or securities to or for the benefit of the Holders of the Securities pursuant to the subrogation provisions of this Article 15, which would otherwise have been paid to the holders of Senior Debt shall be deemed to be a payment by the Company to or for the account of the Securities. It is understood that the provisions of this Article 15 are and are intended solely for the purposes of defining the relative rights of the Holders of the Securities, on the one hand, and the holders of the Senior Debt, on the other hand.

Nothing contained in this Article 15 or elsewhere in this Indenture or in the Securities is intended to or shall impair, as among the Company, its creditors other than the holders of Senior Debt, and the Holders of the Securities, the obligation of the Company, which is absolute and unconditional, to pay to the Holders of the Securities the principal of (and premium, if any) and interest on the Securities as and when the same shall become due and payable in accordance with their terms, or is intended to or shall affect the relative rights of the Holders of the Securities and creditors of the Company other than the holders of the Senior Debt, 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 15 of the holders of Senior Debt in respect of cash, property or securities of the Company received upon the exercise of any such remedy.

Upon any payment or distribution of assets of the Company referred to in this Article 15, the Trustee, subject to the provisions of Section 6.1, and the Holders of the Securities shall be entitled to rely upon any order or decree made by any court of competent jurisdiction in which such bankruptcy, dissolution, winding-up, liquidation or reorganization proceedings are pending, or a certificate of the receiver, trustee in bankruptcy, liquidating trustee, agent or other Person making such payment or distribution, delivered to the Trustee or to the Holders of the securities, for the purpose of ascertaining the Persons entitled to participate in such distribution, the holders of the Senior Debt and other indebtedness of the Company, the amount thereof or payable thereon and all other facts pertinent thereto or to this Article 15.

### **Section 15.4 Authorization to Effect Subordination.**

Each Holder of a Security by the holder's acceptance thereof authorizes and directs the Trustee on the holder's behalf to take such action as may be necessary or appropriate to effectuate the subordination as provided in this Article 15 and appoints the Trustee to act as the holder's attorney-in-fact for any and all such purposes. If the Trustee does not file a proper proof of claim or proof of debt in the form required in any proceeding referred to in Section 5.4 hereof at least 30 days before the expiration of the time to file such claim, the holders of any Senior Debt or their representatives are hereby authorized to file an appropriate claim for and on behalf of the Holders of the Securities.

### **Section 15.5 Notice to Trustee.**

The Company shall give prompt written notice in the form of an Officers' Certificate to a Responsible Officer of the Trustee and to any Paying Agent of any fact known to the Company which would prohibit the making of any payment of monies to or by the Trustee or any Paying Agent in respect of the Securities pursuant to the provisions of this Article 15. Notwithstanding the provisions of this Article 15 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 15, unless and until a Responsible Officer of the Trustee shall have received written notice thereof at the Corporate Trust Office from the Company (in the form of an Officers' Certificate) or a Representative or a holder or holders of Senior Debt or from any Representative therefor; and before the receipt of any such written notice, the Trustee, subject to the provisions of Section 6.1, shall be entitled in all respects to

assume that no such facts exist; provided that if on a date not fewer than two Business Days prior to the date upon which by the terms hereof any such monies may become payable for any purpose (including, without limitation, the payment of the principal of, or premium, if any, or interest on any Security) the Trustee shall not have received, with respect to such monies, the notice provided for in this Section 15.5, then, anything herein contained to the contrary notwithstanding, the Trustee shall have full power and authority to receive such monies and to apply the same to the purpose for which they were received, and shall not be affected by any notice to the contrary which may be received by it on or after such prior date.

Notwithstanding anything in this Article 15 to the contrary, nothing shall prevent any payment by the Trustee to the Holders of monies deposited with it pursuant to Section 4.1, and any such payment shall not be subject to the provisions of Section 15.1 or 15.2.

The Trustee, subject to the provisions of Section 6.1, shall be entitled to rely on the delivery to it of a written notice by a Representative or a Person representing such Person to be a holder of Senior Debt (or a Representative on behalf of such holder) to establish that such notice has been given by a Representative or a holder of Senior Debt or a Representative on behalf of any such holder or holders. The Trustee shall not be required to make any payment or distribution to or on behalf of a holder of Senior Debt pursuant to this Article 15 unless it has received satisfactory evidence as to the amount of Senior Debt 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 15.

#### **Section 15.6 Trustee's Relation to Senior Debt.**

The Trustee in its individual capacity shall be entitled to all the rights set forth in this Article 15 in respect of any Senior Debt at any time held by it, to the same extent as any other holder of Senior Debt, and nothing in this Indenture shall deprive the Trustee of any of its rights as such holder.

With respect to the holders of Senior Debt, the Trustee undertakes to perform or to observe only such of its covenants and obligations as are specifically set forth in this Article 15, and no implied covenants or obligations with respect to the holders of Senior Debt 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 Debt and, subject to the provisions of Section 6.1, the Trustee shall not be liable to any holder of Senior Debt (i) for any failure to make any payments or distributions to such holders or (ii) if it shall pay over or deliver to Holders of Securities, the Company or any other Person money or assets to which any holder of Senior Debt shall be entitled by virtue of this Article 15 or otherwise.

#### **Section 15.7 No Impairment of Subordination.**

No right of any present or future holder of any Senior Debt to enforce subordination as herein provided shall at any time in any way be prejudiced or impaired by any act or failure to act on the part of the Company or by any act or failure to act, in good faith, by any such holder, or by any noncompliance by the Company, the Trustee or any Holder of Securities 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 15.8 Certain Conversions/Exchanges Deemed Payment.**

For the purposes of this Article 15 only, (1) the issuance and delivery of junior securities upon conversion or exchange of Securities in accordance with Article 14 or otherwise (except upon conversion of the Securities in accordance with their terms) shall not be deemed to constitute a payment or distribution on account of the principal of (or premium, if any) or interest on Securities or on account of the purchase or other acquisition of Securities, and (2) the payment, issuance or delivery of cash (except in satisfaction of fractional shares pursuant to Section 14.3), property or securities (other than junior securities) upon conversion or exchange of a Security shall be deemed to constitute payment on account of the principal of such Security. For the purposes of this Section 15.8, the term "junior securities" means (a) shares of any stock of any class of the Company, or (b) securities of the Company which are subordinated in right of payment to all Senior Debt which may be outstanding at the time of issuance or delivery of such securities to substantially the same extent as, or to a greater extent than, the Securities are so subordinated as provided in this Article. Nothing contained in this Article 15 or elsewhere in this Indenture or in the Securities is intended to or shall impair, as among the Company, its creditors other than holders of Senior Debt and the Holders of Securities, the right, which is absolute and unconditional, of the Holder of any Security to convert such Security in accordance with Article 14.

#### **Section 15.9 Article Applicable to Paying Agents.**

If at any time any Paying Agent other than the Trustee shall have been appointed by the Company and be then acting hereunder, the term “Trustee” as used in this Article shall (unless the context otherwise requires) be construed as extending to and including such Paying Agent within its meaning as fully for all intents and purposes as if such Paying Agent were named in this Article in addition to or in place of the Trustee; provided, however, that the first paragraph of Section 15.5 shall not apply to the Company or any Affiliate of the Company if the Company or such Affiliate acts as Paying Agent. The Trustee shall not be responsible for the actions or inactions of any other Paying Agents (including the Company if acting as its own Paying Agent) and shall have no control of any funds held by such other Paying Agents.

#### **Section 15.10 Senior Debt Entitled to Rely.**

The holders of Senior Debt (including, without limitation, Designated Senior Debt) shall have the right to rely upon this Article 15, and no amendment or modification of the provisions contained herein shall diminish the rights of such holders unless the requisite holders of such Senior Debt shall have agreed in writing thereto.

#### **Section 15.11 Reliance on Judicial Order or Certificate of Liquidating Agent.**

Upon any payment or distribution of assets of the Company referred to in this Article, the Trustee and the Holders shall be entitled to rely upon any order or decree entered by any court of competent jurisdiction in which such dissolution, winding up, liquidation, reorganization, assignment for the benefit of creditors or marshalling of assets and liabilities of the Company or bankruptcy, insolvency, receivership or other like proceeding is pending, or a certificate of the trustee in bankruptcy, liquidating trustee, custodian, receiver, assignee for the benefit of creditors, agent or other Person making such payment or distribution, delivered to the Trustee or to the Holders, for the purpose of ascertaining the Persons entitled to participate in such payment or distribution, the holders of Senior Debt and other indebtedness of the Company, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this Article.

#### **Section 15.12 Trust Monies Not Subordinated.**

Notwithstanding anything contained herein to the contrary, payments from money, U.S. Government Obligations and/or Foreign Government Obligations held in trust under Article 4 or Article 13 by the Trustee for the payment of the principal of, premium, if any, and interest on the Securities shall not be subordinated to the prior payment in full of any Senior Debt of the Company or subject to the restrictions set forth in this Article 15, and none of the Holders shall be obligated to pay over any such amount to the Company or any holder of Senior Debt of the Company or any other creditor of the Company.

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Cassava Sciences, Inc.

By: \_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_,  
as Trustee

By: \_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_

**Exhibit 5.1**

March 27, 2020

Cassava Sciences, Inc.  
7801 N. Capital of Texas Highway, Suite 260  
Austin, Texas 78731

Re: Shelf Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Cassava Sciences, Inc., a Delaware corporation (the “Company”), in connection with the Registration Statement on Form S-3 (the “Registration Statement”) to be filed by the Company under the Securities Act of 1933, as amended (the “Securities Act”). The Company has provided us with a base prospectus (the “Base Prospectus”), which forms part of the Registration Statement. The Base Prospectus provides that it will be supplemented in the future by one or more prospectus supplements (each, a “Prospectus Supplement”). The Registration Statement, including the Base Prospectus as supplemented from time to time by one or more Prospectus Supplements, will provide for the registration by the Company of:

- (i) shares of common stock, \$0.001 par value per share, of the Company (the “Common Stock”);
- (ii) shares of preferred stock, \$0.001 par value per share, of the Company (the “Preferred Stock”);
- (iii) debt securities, which may be senior or subordinated, and which may be issued in one or more series (the “Debt Securities”), under the form of senior indenture filed as Exhibit 4.1 and form of subordinated indenture filed as Exhibit 4.2 to the Registration Statement, as such indentures may be supplemented from time to time (the “Indentures”);
- (iv) warrants to purchase Common Stock, Preferred Stock or Debt Securities (the “Warrants”), which may be issued under warrant agreements, to be dated on or about the date of the first issuance of the applicable Warrants thereunder, by and between a warrant agent to be selected by the Company (the “Warrant Agent”) and the Company, in the forms that will be filed as exhibits to the Registration Statement, as such agreements may be supplemented from time to time (each, a “Warrant Agreement”); and
- (v) units comprising shares of Common Stock, shares of Preferred Stock, Debt Securities, debt obligations of third parties, including U.S. treasury securities, warrants or any combination thereof (the “Units”), which may be issued under unit agreements, to be dated on or about the date of the first issuance of the applicable Units thereunder, by and between a unit agent to be selected by the Company (the “Unit Agent”) and the Company, in the forms that will be filed as exhibits to the Registration Statement, as such agreements may be supplemented from time to time (each, a “Unit Agreement”).

The Common Stock, the Preferred Stock, the Debt Securities, the Warrants and the Units are collectively referred to herein as the “Shelf Securities.” The Shelf Securities are being registered for offering and sale from time to time pursuant to Rule 415 under the Securities Act. The aggregate public offering price of the Shelf Securities being registered will not exceed \$200,000,000.

We also have acted as counsel to the Company in connection with the sale through SVB Leerink LLC as the sales agent (the “Sales Agent”) from time to time by the Company of shares of Common Stock (the “Sales Agreement”)

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Shares”) having an aggregate offering price of up to \$100,000,000 pursuant to the Registration Statement, the Base Prospectus and the related Prospectus Supplement for the sale of the Sales Agreement Shares included in the Registration Statement (the “Sales Agreement Supplement”), and that certain Sales Agreement dated as of March 27, 2020, between the Sales Agent and the Company (the “Sales Agreement”). The Sales Agreement Shares, together with the Shelf Securities, are collectively referred to herein as the “Securities.”

In connection with this opinion, we have examined such corporate records, documents, instruments, certificates of public officials and of the Company and such questions of law as we have deemed necessary for the purpose of rendering the opinions set forth herein. We also have examined the Registration Statement, the Indentures and the Sales Agreement.

In such examination, we have assumed the genuineness of all signatures and the authenticity of all items submitted to us as originals and the conformity with originals of all items submitted to us as copies. In making our examination of documents executed by parties other than the Company, we have assumed that each other party has the power and authority (or where such party is an individual, the capacity) to execute and deliver, and to perform and observe the provisions of, such documents, and the due authorization by each such party of all requisite action and the due execution and delivery of such documents by each such party, and that such documents constitute the legal, valid and binding obligations of each such party enforceable against such party in accordance with their terms.

The opinions hereinafter expressed are subject to the following qualifications and exceptions:

- (i) the effect of bankruptcy, insolvency, reorganization, arrangement, moratorium or other similar laws relating to or affecting the rights of creditors generally, including, without limitation, laws relating to fraudulent transfers or conveyances, preferences and equitable subordination;
- (ii) limitations imposed by general principles of equity upon the availability of equitable remedies or the enforcement of provisions of any Debt Securities, Common Stock, Preferred Stock, Warrants or Units, and the effect of judicial decisions which have held that certain provisions are unenforceable where their enforcement would violate the implied covenant of good faith and fair dealing, or would be commercially unreasonable, or where their breach is not material; and
- (iii) our opinion is based upon current statutes, rules, regulations, cases and official interpretive opinions, and it covers certain items that are not directly or definitively addressed by such authorities.

With respect to our opinion as to the Common Stock, we have assumed that, at the time of issuance and sale, a sufficient number of shares of Common Stock are authorized and available for issuance and that the consideration for the issuance and sale of the Common Stock (or Preferred Stock convertible into Common Stock, Debt Securities convertible into Common Stock or Warrants exercisable for Common Stock) is in an amount that is not less than the par value of the Common Stock.

With respect to our opinion as to the Preferred Stock, we have assumed that, at the time of issuance and sale, a sufficient number of shares of Preferred Stock are authorized, designated and available for issuance and that the consideration for the issuance and sale of the Preferred Stock (or Debt Securities convertible into Preferred Stock or Warrants exercisable for Preferred Stock) is in an amount that is not less than the par value of the Preferred Stock.

We have also assumed that any Warrants and Units offered under the Registration Statement, and the related Warrant Agreement and Unit Agreement, as applicable, will be duly authorized, executed and delivered in the forms that will be filed as exhibits to the Registration Statement or incorporated by reference therein.

We have also assumed that with respect to Securities being issued upon conversion of any convertible Preferred Stock, the applicable Preferred Stock will be duly authorized, validly issued, fully paid and nonassessable.

We have also assumed that (i) all Securities will be issued and sold in compliance with the Trust Indenture Act of 1939 and the securities or blue sky laws of various states and in the manner stated in the Registration Statement and

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the applicable prospectus supplement and (ii) the trustee under the Indentures (the “Trustee”) will be qualified pursuant to the Trust Indenture Act of 1939 at the time the Securities are offered or issued (or such later time as may be permitted pursuant to the rules, regulations, interpretations or positions of the Securities and Exchange Commission) as contemplated by the Registration Statement.

Our opinion herein is expressed solely with respect to Federal Securities Laws, the Delaware General Corporation Law and, as to the Debt Securities constituting valid and legally binding obligations of the Company, solely with respect to the laws of the State of New York.

Our opinion is based on these laws as in effect on the date hereof. We express no opinion as to whether the laws of any jurisdiction are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal law or state law, rule or regulation relating to securities, or to the sale or issuance thereof.

Based upon and subject to the foregoing, we are of the opinion that:

1. With respect to the Common Stock offered under the Registration Statement, including the Sales Agreement Shares, provided that (i) the Registration Statement and any required post-effective amendment thereto have all become effective under the Securities Act and the Base Prospectus, the Sales Agreement Supplement (with respect to the Sales Agreement Shares) and any and all other Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws; (ii) the issuance of the Common Stock (other than the Sales Agreement Shares, which have already been duly authorized by all necessary corporate action on the part of the Company) has been duly authorized by all necessary corporate action on the part of the Company; (iii) the issuance and sale of the Common Stock do not violate any applicable law, are in conformity with the Company’s then operative Amended and Restated Certificate of Incorporation (the “Certificate of Incorporation”) and Bylaws (the “Bylaws”), do not result in a default under or breach of any agreement or instrument binding upon the Company and comply with any applicable requirement or restriction imposed by any court or governmental body having jurisdiction over the Company; and (iv) the certificates for the Common Stock have been duly executed by the Company, countersigned by the transfer agent therefor and duly delivered to the purchasers thereof against payment therefor, then the Common Stock, when issued and sold as contemplated in the Registration Statement, the Base Prospectus, the Sales Agreement Supplement (with respect to the Sales Agreement Shares) and any other related Prospectus Supplement(s) and in accordance with any applicable duly authorized, executed and delivered purchase, underwriting or similar agreement, will be duly authorized, validly issued, fully paid and nonassessable.

2. With respect to the Preferred Stock offered under the Registration Statement, provided that (i) the Registration Statement and any required post-effective amendment thereto have all become effective under the Securities Act and the Base Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws; (ii) the terms and issuance of the Preferred Stock have been duly authorized by all necessary corporate action on the part of the Company; (iii) the terms of the shares of Preferred Stock and their issuance and sale do not violate any applicable law, are in conformity with the Certificate of Incorporation and Bylaws, do not result in a default under or breach of any agreement or instrument binding upon the Company and comply with any applicable requirement or restriction imposed by any court or governmental body having jurisdiction over the Company; and (iv) the certificates for the Preferred Stock have been duly executed by the Company, countersigned by the transfer agent therefor and duly delivered to the purchasers thereof against payment therefor, then the Preferred Stock, when issued and sold as contemplated in the Registration Statement, the Base Prospectus and the related Prospectus Supplement(s) and in accordance with any applicable duly authorized, executed and delivered purchase, underwriting or similar agreement, will be duly authorized, validly issued, fully paid and nonassessable.

3. With respect to any series of the Debt Securities issued under the Indentures and offered under the Registration Statement, provided that (i) the Registration Statement and any required post-effective amendment thereto have all become effective under the Securities Act and the Base Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws; (ii) the Indentures have been duly authorized by the Company and the Trustee by all necessary corporate action; (iii) the Indentures are in substantially the form that filed as an exhibit to the Registration Statement has been duly executed and delivered by the Company and the Trustee; (iv) the issuance and terms of the Debt Securities have been duly authorized by the Company by all necessary corporate action; (v) the terms of the Debt Securities and of their issuance and sale have

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been duly established in conformity with the Indentures so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company, so as to be in conformity with the Certificate of Incorporation and Bylaws, and so as to comply with any requirement, restriction, consent, approval, license or authorization imposed or granted by any court or governmental body having jurisdiction over the Company; and (vi) the Debt Securities have been duly executed and delivered by the Company and authenticated by the Trustee pursuant to the Indentures and delivered against payment therefor, then the Debt Securities, when issued and sold in accordance with the Indentures and a duly authorized, executed and delivered purchase, underwriting or similar agreement, or upon exercise of any Warrants under the Warrant Agreement, will be valid and legally binding obligations of the Company, enforceable against the Company in accordance with their terms.

4. With respect to the Warrants issued under the Warrant Agreement and offered under the Registration Statement, provided that (i) the Registration Statement and any required post-effective amendment thereto have all become effective under the Securities Act and the Base Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws; (ii) the Warrant Agreement has been duly authorized by the Company and the Warrant Agent by all necessary corporate action; (iii) the Warrant Agreement has been duly executed and delivered by the Company and the Warrant Agent; (iv) the issuance and terms of the Warrants have been duly authorized by the Company by all necessary corporate action; (v) the terms of the Warrants and of their issuance and sale have been duly established in conformity with the Warrant Agreement and as described in the Registration Statement, the Base Prospectus and the related Prospectus Supplement(s), so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company, so as to be in conformity with the Certificate of Incorporation and Bylaws, and so as to comply with any requirement, restriction, consent, approval, license or authorization imposed or granted by any court or governmental body having jurisdiction over the Company; and (vi) the Warrants have been duly executed and delivered by the Company and authenticated by the Warrant Agent pursuant to the Warrant Agreement and delivered against payment therefor, then the Warrants, when issued and sold in accordance with the Warrant Agreement and a duly authorized, executed and delivered purchase, underwriting or similar agreement, will be valid and legally binding obligations of the Company, enforceable against the Company in accordance with their terms.

5. With respect to the Units issued under the Unit Agreement and offered under the Registration Statement, provided that (i) the Registration Statement and any required post-effective amendment thereto have all become effective under the Securities Act and the Base Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws; (ii) the Unit Agreement has been duly authorized by the Company and the Unit Agent by all necessary corporate action; (iii) the Unit Agreement has been duly executed and delivered by the Company and the Unit Agent; (iv) the issuance and terms of the Units have been duly authorized by the Company by all necessary corporate action; (v) the terms of the Units and of their issuance and sale have been duly established in conformity with the Unit Agreement and as described in the Registration Statement, the Base Prospectus and the related Prospectus Supplement(s), so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company, so as to be in conformity with the Certificate of Incorporation and Bylaws, and so as to comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company; and (vi) the Units have been duly executed and delivered by the Company and authenticated by the Unit Agent pursuant to the Unit Agreement and delivered against payment therefor, then the Units, when issued and sold in accordance with the Unit Agreement and a duly authorized, executed and delivered purchase, underwriting or similar agreement, will be valid and legally binding obligations of the Company, enforceable against the Company in accordance with their terms.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the Base Prospectus and the Sales Agreement Supplement which form parts of the Registration Statement. In giving such permission, we do not admit hereby that we come within the category of persons whose consent is required under Section 7 of the Securities Act, or the rules and regulations of promulgated thereunder. This opinion is expressed as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes of the facts stated or assumed herein or of any subsequent changes in applicable law.

Very truly yours,

/s/ Morrison & Foerster LLP

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**Consent of Independent Registered Public Accounting Firm**

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated March 26, 2020, in the Registration Statement (Form S-3) and related Prospectus of Cassava Sciences, Inc. dated March 26, 2020.

/s/ Ernst & Young LLP

Austin, Texas  
March 26, 2020

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