

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

FORM S-3
REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

NAVIDEA BIOPHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation or organization)

31-1080091
(I.R.S. Employer
Identification Number)

**4995 Bradenton Avenue, Suite 240
Dublin, Ohio 43017-3552
(614) 793-7500**

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

Jed A. Latkin
Chief Executive Officer, Chief Financial Officer and Chief Operating Officer
Navidea Biopharmaceuticals, Inc.
4995 Bradenton Avenue, Suite 240
Dublin, Ohio 43017-3552
(614) 793-7500

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

Copy to:

Faith L. Charles, Esq.
Thompson Hine LLP
335 Madison Avenue, 12th Floor
New York, New York 10017-4611
(212) 908-3905
Faith.Charles@thompsonhine.com

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

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

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

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

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

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

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

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

Calculation of Registration Fee

Title of each class of securities to be registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Unit (2)(3)	Proposed Maximum Aggregate Offering Price (2)(3)	Amount of Registration Fee
Common Stock, \$0.001 par value per share				
Preferred Stock, \$0.001 par value per share				
Debt Securities				
Warrants				
Purchase Contracts				
Rights				
Units				
Total			\$23,400,000(4)	\$2,552.94(4)

(1) This registration statement covers an indeterminate amount of the securities of each identified class registered hereunder as may from time to time be offered and issued hereunder at indeterminate prices and shall have an aggregate initial offering price not to exceed \$100,000,000, along with an indeterminate number of securities that may be issued upon exercise, settlement, exchange or conversion of securities offered or sold hereunder. Separate consideration may or may not be received for securities that are issuable upon conversion, exercise, or exchange of other securities, or pursuant to the anti-dilution provisions of any such securities. Any securities registered hereunder may be sold separately or as units with other securities registered hereunder. This registration statement also covers, pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), an indeterminate number of shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends, or similar transactions.

- (2) The proposed maximum aggregate offering price per class of security will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered hereunder and is not specified as to each class of security pursuant to General Instruction II.D. of Form S-3 under the Securities Act.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act.
- (4) The \$100,000,000 of securities registered pursuant to this registration statement includes \$76,600,000 of securities (the "*Unsold Securities*") registered pursuant to a registration statement on Form S-3 (Registration No. 333-222092), originally filed on December 15, 2017, and declared effective on December 27, 2017 (the "*Prior Registration Statement*"). Pursuant to Rule 415(a)(6) under the Securities Act of 1933, as amended, the filing fees previously paid in connection with the Unsold Securities will continue to be applied to the Unsold Securities. A filing fee of \$2,552.94 is paid herewith in connection with the \$23,400,000 of additional securities registered 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 that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act, or until the registration statement shall become effective on such date as the U.S. Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information contained in this prospectus is not complete and may be changed. We may not sell these securities until this registration statement becomes effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED FEBRUARY 8, 2021

PROSPECTUS



Navidea Biopharmaceuticals, Inc.

\$100,000,000

**Common Stock
Preferred Stock
Debt Securities
Warrants
Purchase Contracts
Rights
Units**

We may offer and sell, from time to time, in one or more offerings, up to \$100,000,000 aggregate amount of any securities described in this prospectus, separately or together in any combination, in one or more classes or series, in amounts, at prices, and on terms that we will determine at the time of the offering.

This prospectus provides a general description of the securities we may offer. Each time we sell securities, we will provide specific terms of the securities offered in one or more supplements to this prospectus. The prospectus supplement may also add, update or change information contained in this prospectus. You should read this prospectus and the applicable prospectus supplement carefully before you invest in any securities. This prospectus may not be used to consummate a sale of securities unless accompanied by the applicable prospectus supplement.

We will sell these securities directly to purchasers, or through agents on our behalf, or through underwriters or dealers as designated from time to time. If any agents or underwriters are involved in the sale of any of these securities, the applicable prospectus supplement will provide the names of the agents or underwriters and any applicable fees, commissions or discounts.

Our common stock is listed on the NYSE American exchange (the "NYSE American") under the symbol "NAV.B." The last reported sale price of our common stock on February 5, 2021 was \$2.66 per share. The applicable prospectus supplement will contain information, where applicable, as to the listing of any other securities covered by the prospectus supplement other than our common stock on the NYSE American or any other securities exchange.

Investing in our securities involves a high degree of risk. Before investing in our securities, we recommend that you carefully read this entire prospectus, including the section entitled "Risk Factors" on page 7, any applicable supplements to this prospectus, and the documents we file with the U.S. Securities and Exchange Commission from time to time.

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

The date of this prospectus is _____, 2021.

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ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement on Form S-3 that we filed with the U.S. Securities and Exchange Commission (the "SEC") utilizing a "shelf" registration process. Under this shelf registration process, we may offer to sell the securities described in this prospectus, alone or in combination, in one or more offerings up to a total aggregate offering price of \$100,000,000.

This prospectus provides a general description of the securities we may offer. We may provide specific terms of securities to be offered in one or more supplements to this prospectus. We may also provide a specific plan of distribution for any securities to be offered in a prospectus supplement. Prospectus supplements may also add, update or change information in this prospectus. If the information varies between this prospectus and the accompanying prospectus supplement, you should rely on the information in the accompanying prospectus supplement.

Before purchasing any securities, you should carefully read both this prospectus and any prospectus supplement, together with the additional information described under the heading "Incorporation by Reference." You should rely only on the information contained or incorporated by reference in this prospectus, any prospectus supplement and any free writing prospectus prepared by or on behalf of us or to which we have referred you. None of us, nor any underwriters, have authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should assume that the information contained in this prospectus, any prospectus supplement or any free writing prospectus is accurate only as of the date on its respective cover, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading "Where You Can Find More Information."

This prospectus and any applicable prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate. We are not making offers to sell common stock or any other securities described in this prospectus in any jurisdiction in which an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation.

In this prospectus, "we," "us," "our" and "Navidea" refer to Navidea Biopharmaceuticals, Inc. and its subsidiaries.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act, as amended (the "*Securities Act*"), with respect to the securities being offered by this prospectus. This prospectus, which constitutes part of the registration statement, omits certain information, exhibits, schedules and undertakings set forth in the registration statement. You should refer to the registration statement and its exhibits and schedules for additional information. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, the references are not necessarily complete and you should refer to the exhibits filed with the registration statement for copies of the actual contract, agreement or other document. Statements contained in this prospectus as to the contents of any contract or other document referred to in this prospectus are not necessarily complete and, where that contract is an exhibit to the registration statement, each statement is qualified in all respects by reference to the exhibit to which the reference relates.

The SEC maintains an internet website at <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. The periodic reports, proxy statements and other information we file with the SEC are available for inspection on the Commission's website free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. We also maintain a website at <http://www.navidea.com> where you may access these materials free of charge. We have included our website address as an inactive textual reference only and the information contained in, and that can be accessed through, our website is not incorporated into and is not part of this prospectus.

INCORPORATION BY REFERENCE

The SEC allows us to “incorporate by reference” into this prospectus the information we file with the SEC (Commission File No. 001-35076), which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. Information that we file with the SEC after the date of this prospectus will automatically update this prospectus. We incorporate by reference the documents listed below, and any filings we make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934 after the initial filing of the registration statement that contains this prospectus (except, in each case, documents or information deemed to have been furnished and not filed in accordance with SEC rules):

- our annual report on Form 10-K for the year ended December 31, 2019, filed with the SEC on [March 18, 2020](#);
- our quarterly reports on Form 10-Q for the quarters ended March 31, 2020, June 30, 2020 and September 30, 2020, filed with the SEC on [May 15, 2020](#), [August 14, 2020](#) and [November 13, 2020](#), respectively;
- our current reports on Form 8-K and all amendments thereto on Form 8-K/A, filed with the SEC on [February 14, 2020](#), [February 18, 2020](#), [May 12, 2020](#), [May 21, 2020](#), [June 4, 2020](#), [July 31, 2020](#), [August 10, 2020](#), [August 12, 2020](#), [August 17, 2020](#), [September 2, 2020](#), [September 10, 2020](#) and [December 28, 2020](#); and
- the description of our common stock contained in our registration statement on Form 8-A, filed with the SEC on [February 8, 2011](#), including all amendments and reports filed for the purpose of updating such description.

Information furnished by us in Current Reports on Form 8-K under Items 2.02 and 7.01 (and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) is expressly not incorporated by reference in this prospectus.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge, upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits that are specifically incorporated by reference into such documents. You may request a copy of these filings at no cost, by writing to or telephoning us at:

Navidea Biopharmaceuticals, Inc.
Attention: Jed A. Latkin
4995 Bradenton Avenue, Suite 240
Dublin, Ohio 43017-3552
(614) 793-7500

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

The Private Securities Litigation Reform Act of 1995 (the “*PSLRA*”) provides a safe harbor for forward-looking statements made by or on behalf of the Company. Statements in this document which relate to other than strictly historical facts, such as statements about the Company’s plans and strategies, expectations for future financial performance, new and existing products and technologies, anticipated clinical and regulatory pathways, the ability to obtain, and timing of, regulatory approvals of the Company’s products, the timing and anticipated results of commercialization efforts, and anticipated markets for the Company’s products, are forward-looking statements within the meaning of the PSLRA. The words “anticipate,” “believe,” “estimate,” “expect,” “future,” “intend,” “plan,” “project,” and similar expressions identify forward-looking statements that speak only as of the date hereof. Investors are cautioned that such statements involve risks and uncertainties that could cause actual results to differ materially from historical or anticipated results due to many factors including, but not limited to, our history of operating losses and uncertainty of future profitability, accumulated deficit, future capital needs, the outcome of any pending litigation, uncertainty of capital funding, dependence on royalties and grant revenue, limited product line and distribution channels, competition, risks of development of new products, our ability to maintain effective control over financial reporting, our ability to comply with NYSE American continued listing standards, and other risks set forth in our Form 10-K under Item 1A, “Risk Factors” and beginning on page 9 of this prospectus. Navidea undertakes no obligation to publicly update or revise any forward-looking statements. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, but not limited to:

- the impact of the global COVID-19 pandemic on our business, financial condition or prospects, including a decline in the volume of procedures using our products, potential delays and disruptions to global supply chains, manufacturing activities, logistics, operations, employees and contractors, the business activities of our suppliers, distributors, customers and other business partners, as well as the effects on worldwide economies, financial markets, social institutions, labor markets and healthcare systems;
- our history of operating losses and uncertainty of future profitability;
- our ability to successfully complete research and further development of our drug candidates;
- the timing, cost and uncertainty of obtaining regulatory approvals of our drug candidates, including delays and additional costs related to the ongoing COVID-19 pandemic;
- our ability to successfully commercialize our drug candidates, including delays or disruptions related to the ongoing COVID-19 pandemic;
- our ability to raise capital sufficient to fund our development programs, including unavailability of funds or delays in receiving funds as a result of the ongoing COVID-19 pandemic;
- delays in receipt of anticipated proceeds from our capital funding transactions and other receivables;
- our dependence on royalties and grant revenue;
- our limited product line and distribution channels;
- advances in technologies and development of new competitive products;
- our ability to maintain effective control over financial reporting;
- the outcome of any pending litigation;
- our ability to comply with NYSE American continued listing standards; and
- other risk factors set forth in this report and detailed in our most recent Annual Report on Form 10-K and other SEC filings.

In addition, in this prospectus, we use words such as “anticipate,” “believe,” “estimate,” “expect,” “future,” “intend,” “plan,” “project,” and similar expressions to identify forward-looking statements.

We undertake no obligation to update publicly or revise any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this report. In light of these risks and uncertainties, the forward-looking events and circumstances discussed in this report may not occur and actual results could differ materially from those anticipated or implied in the forward-looking statements.

ABOUT NAVIDEA BIOPHARMACEUTICALS, INC.

The following is only a summary. We urge you to read the more detailed description of our business, financial statements, notes to the financial statements and other information incorporated herein by reference from our other filings with the SEC, including, but not limited to Part I, Item 1 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2019. See the section entitled “Where You Can Find More Information” for the location of information incorporated by reference in this prospectus. Investors should also consider the information provided under the heading “Risk Factors” on page 7 and as set forth in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

Navidea Biopharmaceuticals, Inc., a Delaware corporation (NYSE American: NAVB), is a biopharmaceutical company focused on the development and commercialization of precision immunodiagnostic agents and immunotherapeutics. Navidea is developing multiple precision-targeted products based on our Manocept™ platform to enhance patient care by identifying the sites and pathways of undetected disease and enable better diagnostic accuracy, clinical decision-making and targeted treatment.

Navidea’s Manocept platform is predicated on the ability to specifically target the CD206 mannose receptor expressed on activated macrophages. The Manocept platform serves as the molecular backbone of Tc99m tilmanocept, the first product developed and commercialized by Navidea based on the platform.

In March 2017, the Company completed the sale to Cardinal Health 414, LLC (“Cardinal Health 414”) of its assets related to the Company’s radioactive diagnostic agent Tc99m tilmanocept, marketed under the Lymphoseek® trademark, used for lymphatic mapping, lymph node biopsy, and the diagnosis of metastatic spread to lymph nodes for staging of cancer, in Canada, Mexico and the United States.

Other than Tc99m tilmanocept, which the Company has a license to distribute outside of Canada, Mexico and the United States, none of the Company’s drug product candidates have been approved for sale in any market.

Our business is focused on two primary types of drug products: (i) diagnostic substances, including Tc99m tilmanocept and other diagnostic applications of our Manocept platform, and NAV4694 (sublicensed in April 2018), and (ii) therapeutic development programs, including therapeutic applications of our Manocept platform.

Our corporate headquarters are located at 4995 Bradenton Avenue, Suite 240, Dublin, Ohio 43017-3552 and our telephone number is (614) 793-7500. We maintain a website at www.navidea.com, to which we regularly post copies of our press releases as well as additional information about us. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), are available free of charge through the investor relations page of our internet website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

RISK FACTORS

Investing in our securities involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the specific risk factors discussed in the sections entitled “Risk Factors” contained in our annual report on Form 10-K for the fiscal year ended December 31, 2019 under the heading “Item 1A. Risk Factors,” and as described or may be described in any subsequent quarterly report on Form 10-Q under the heading “Item 1A. Risk Factors,” as well as in any applicable prospectus supplement and contained or to be contained in our filings with the SEC and incorporated by reference in this prospectus, together with all of the other information contained in this prospectus, or any applicable prospectus supplement. For a description of these reports and documents, and information about where you can find them, see “Where You Can Find More Information” and “Incorporation By Reference.” If any of the risks or uncertainties described in our SEC filings or any prospectus supplement or any additional risks and uncertainties actually occur, our business, financial condition and results of operations could be materially and adversely affected. In that case, the trading price of our securities could decline and you might lose all or part of the value of your investment.

USE OF PROCEEDS

We will retain broad discretion over the use of the net proceeds from the sale of the securities offered hereby. Unless otherwise indicated in the applicable prospectus supplement, we currently intend to use the net proceeds from the sale of securities under this prospectus for general corporate purposes, including, but not limited to, additions to working capital, repayment of indebtedness and financing capital expenditures and licenses or acquisitions. Pending any specific application, we may initially invest funds in short-term marketable securities or apply them to the reduction of short-term indebtedness. The prospectus supplement relating to a particular offering of securities by us will identify the use of proceeds for that offering.

DESCRIPTION OF CAPITAL STOCK

General

The following description of our capital stock is only a summary and is subject to the provisions of our amended and restated certificate of incorporation and our amended and restated bylaws, which are filed as exhibits to the report to which this exhibit is attached.

Our authorized capital stock consists of:

- 300,000,000 shares of common stock, \$0.001 par value per share; and
- 5,000,000 shares of undesignated preferred stock, \$0.001 par value per share, of which we have designated 150,000 as Series D Redeemable Convertible Preferred Stock (the “*Series D Preferred*”).

As of February 5, 2021, there are 27,984,669 shares of common stock outstanding and no shares of Series D Preferred outstanding.

Common Stock

Dividends

Subject to the rights and preferences of any outstanding preferred stock, each share of common stock is entitled to receive, when and as declared by the board of directors, out of our available assets at such time, such dividends as may be declared from time to time by the board of directors. We have never paid dividends on our common stock and do not intend to do so in the foreseeable future. We intend to retain any future earnings to finance our growth.

Liquidation

If our company is liquidated, any assets that remain after the creditors are paid, and the owners of preferred stock receive any liquidation preferences, will be distributed to the owners of our common stock pro-rata. Neither the merger or consolidation by us into or with any other corporation, nor the merger or consolidation of any other corporation into or with us, nor the sale, lease, exchange or other disposition (for cash, shares of stock, securities, or other consideration) of all or substantially all our assets, will be deemed to be a dissolution, liquidation, or winding up of our business, whether voluntary or involuntary.

Voting Rights

Each share of our common stock entitles the owner to one vote. There is no cumulative voting. Our directors are elected by a plurality of the votes of the shares present in person or represented by proxy at meetings of our stockholders and entitled to vote in the election of directors.

Preemptive Rights

Owners of our common stock do not have any preemptive rights. We may sell shares of our common stock to third parties without first offering it to current stockholders.

Redemption Rights

We do not have the right to buy back shares of our common stock except in extraordinary transactions such as mergers and court approved bankruptcy reorganizations. Owners of our common stock do not ordinarily have the right to require us to buy their common stock. We do not have a sinking fund to provide assets for any buy back.

Conversion Rights

Shares of our common stock cannot be converted into any other kind of stock except in extraordinary transactions, such as mergers and court approved bankruptcy reorganizations.

Market Information

Our common stock is listed on the NYSE American under the symbol “NAVB.”

Transfer Agent and Registrar

The transfer agent for our common stock is Continental Stock Transfer & Trust Company, located at One State Street, 30th Floor, New York, NY 10004. Their telephone number is (212) 509-4000.

Blank Check Preferred Stock

Our certificate of incorporation authorizes our board of directors to issue “blank check” preferred stock. The board of directors may divide this stock into series and set their rights.

Under the terms of our certificate of incorporation, our board of directors has the authority, without further action by our stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series and to determine and alter all rights, preferences, and privileges and qualifications, limitations, and restrictions thereof (including, without limitation, voting rights and the limitation and exclusion thereof).

The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could make it more difficult for a third party to acquire, or could adversely affect the rights of our common stockholders by restricting dividends on the common stock, diluting the voting power of the common stock, impairing the liquidation rights of the common stock or delaying or preventing a change in control without further action by the stockholders. As a result of these or other factors, the issuance of preferred stock could have an adverse impact on the market price of our common stock.

All shares of preferred stock offered hereby will, when issued, be fully paid and non-assessable and, unless otherwise stated in a prospectus supplement relating to the series of preferred stock being offered, will not have any preemptive or similar rights. We will set forth in a prospectus supplement relating to the class or series of preferred stock being offered the specific terms of each series of our preferred stock, including the price at which the preferred stock may be purchased, the number of shares of preferred stock offered, and the terms, if any, on which the preferred stock may be convertible into common stock or exchangeable for other securities.

Description of Series D Preferred

On August 31, 2020, Navidea filed with the Secretary of State of the State of Delaware a Certificate of Designations, Voting Powers, Preferences, Limitations, Restrictions, and Relative Rights of Series D Redeemable Convertible Preferred Stock (the “*Series D Preferred Certificate*”). The Series D Preferred Certificate authorizes 150,000 shares of Series D Preferred and establishes the rights and preferences of the Series D Preferred, including as follows:

- Except with respect to transactions that may adversely affect any right, preference, privilege or voting power of the Series D Preferred, the Series D Preferred has no voting rights.
- Whenever Navidea’s board of directors declares a dividend on Navidea’s common stock, each record holder of a share of Series D Preferred on the record date set by the board will be entitled to receive an amount equal to such dividend declared on one share of common stock multiplied by the number of shares of common stock into which such share of Series D Preferred could be converted on the record date, without regard to any conversion limitations in the Series D Preferred Certificate.

- Holders of the Series D Preferred may convert some or all of the Series D Preferred into shares of the Company's common stock at a 10% discount to market, provided that Navidea may not issue such conversion shares in excess of 19.99% of the number of shares of Common Stock outstanding as of the date of the initial Call Closing the Exchange Cap (which, as of the date hereof, is approximately 5,150,000 shares) without shareholder approval, which the Company is not required to seek.
- At no time may a holder of Series D Preferred convert shares of Series D Preferred (or have its Series D Preferred redeemed) if the number of shares of Company common stock to be issued pursuant to such conversion or redemption, when aggregated with all other shares of Company common stock owned by such holder at such time, would result in the holder owning (as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules thereunder) more than 4.99% of all of the Company common stock outstanding at such time; provided, however, that such holder may waive this limitation by providing the Company with sixty-one (61) days' prior notice. Notwithstanding the foregoing, in no instance may the Company issue shares of common stock to any holder of Series D Preferred if as a result such holder would be the beneficial owner of more than 9.99% of all of the Company common stock outstanding at such time. This 9.99% limitation may not be waived.
- The Company has the right to redeem any outstanding shares of Series D Preferred at any time at a price of \$110 per share, payable in cash or in registered shares of common stock.

Exclusive Forum Selection

Our Amended and Restated By-Laws provide that, unless the Company consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for

- (i) any derivative action or proceeding brought on behalf of the Company,
- (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or the corporation's stockholders,
- (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or
- (iv) any action asserting a claim governed by the internal affairs doctrine.

This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that the stockholder finds favorable for disputes with us or any of our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees. This choice of forum provision does not preclude or contract the scope of exclusive federal jurisdiction for any actions brought under the Exchange Act. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction, and the Company does not intend for the exclusive forum provision to apply to Exchange Act claims. Additionally, this choice of forum provision will not apply to claims as to which the Court of Chancery of the State of Delaware does not have subject matter jurisdiction. It could apply, however, to a suit that falls within one or more of the categories enumerated in the exclusive forum provision and that asserts claims under the Securities Act, inasmuch as Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. There is uncertainty as to whether a court would enforce such an exclusive forum provision with respect to claims under the Securities Act. In addition, our stockholders will not be deemed to have waived the Company's compliance with the federal securities laws and the rules and regulations thereunder. Subject to the foregoing, any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the corporation shall be deemed to have notice of and consented to this provision of our Amended and Restated By-Laws.

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplement, summarizes certain general terms and provisions of the debt securities that we may offer in one or more series under this prospectus. When we offer to sell a particular series of debt securities, we will describe the specific terms of the series in a supplement to this prospectus. We will also indicate in the supplement to what extent the general terms and provisions described in this prospectus apply to a particular series of debt securities.

We may issue debt securities either separately, or together with, or upon the conversion or exercise of or in exchange for, other securities described in this prospectus. Debt securities may be our senior, senior subordinated or subordinated obligations and, unless otherwise specified in a supplement to this prospectus, the debt securities will be our direct, unsecured obligations.

We will issue the debt securities under the indenture that we will enter into with a national banking association or other eligible party, as trustee. The indenture will be qualified under the Trust Indenture Act of 1939, as amended (the "*Trust Indenture Act*"). We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indenture is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. The summary is not complete. The form of the indenture has been filed as an exhibit to the registration statement and you should read the indenture for provisions that may be important to you. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

General

We can issue an unlimited amount of debt securities under the indenture that may be in one or more series with the same or various maturities, at par, at a premium, or at a discount. The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth in an officer's certificate or a supplemental indenture. The particular terms of each series of debt securities will be described in a prospectus supplement relating to such series (including any pricing supplement or term sheet), including the following terms, if applicable:

- the title and ranking of the debt securities (including the terms of any subordination provisions);
- the price or prices (expressed as a percentage of the principal amount) at which we will sell the debt securities;
- the aggregate principal amount of the debt securities being offered and any limit on the aggregate principal amount of such series of debt securities;
- whether any of our direct or indirect subsidiaries will guarantee the debt securities, including the terms of subordination, if any, of such guarantees;
- the date or dates on which the principal of the securities of the series is payable;
- the interest rate, if any, and the method for calculating the interest rate;
- the dates from which interest will accrue, the interest payment dates and the record dates for the interest payments;

- the place or places where principal of, and any interest on, the debt securities will be payable (and the method of such payment), where the securities of such series may be surrendered for registration of transfer or exchange, and where notices and demands to us in respect of the debt securities may be delivered;
- any mandatory or optional redemption terms;
- any obligation we have to redeem or purchase the debt securities pursuant to any sinking fund or analogous provisions or at the option of a holder of debt securities and the period or periods within which, the price or prices at which and the terms and conditions upon which securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;
- any dates, if any, on which and the price or prices at which we will repurchase debt securities at the option of the holders of debt securities and other detailed terms and provisions of such repurchase obligations;
- the denominations in which the debt securities will be issued;
- whether the debt securities will be issued in the form of certificated debt securities or global debt securities;
- the currency of denomination of the debt securities, which may be U.S. dollars or any foreign currency, and if such currency of denomination is a composite currency, the agency or organization, if any, responsible for overseeing such composite currency;
- the designation of the currency, currencies or currency units in which payment of the principal of, and any interest on, the debt securities will be made;
- if payments of principal of, any interest on, the debt securities will be made in one or more currencies or currency units other than that or those in which the debt securities are denominated, the manner in which the exchange rate with respect to such payments will be determined;
- the manner in which the amounts of payment of principal of, or any interest on, the debt securities will be determined, if these amounts may be determined by reference to an index based on a currency or currencies or by reference to a commodity, commodity index, stock exchange index or financial index;
- any provisions relating to any security provided for the debt securities;
- any addition to, deletion of or change in the events of default described in this prospectus or in the indenture with respect to the debt securities and any change in the acceleration provisions described in this prospectus or in the indenture with respect to the debt securities;
- any addition to, deletion of or change in the covenants described in this prospectus or in the indenture with respect to the debt securities;
- any depositaries, interest rate calculation agents, exchange rate calculation agents or other agents appointed with respect to the debt securities;
- the provisions, if any, relating to conversion or exchange of any series of debt securities, including if applicable, the conversion or exchange price and period, the securities or other property into which the debt securities will be convertible, provisions as to whether conversion or exchange will be mandatory, at the option of the holders thereof or at our option, the events requiring an adjustment of the conversion price or exchange price and provisions affecting conversion or exchange if such series of debt securities are redeemed; and
- any other terms of the series of debt securities that may supplement, modify or delete any provision of the indenture as it applies to that series, including any terms that may be required under applicable law or regulations or advisable in connection with the marketing of the debt securities.

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

If we denominate the purchase price of any of the debt securities in a foreign currency or currencies or a foreign currency unit or units, or if the principal of and any premium and interest on any series of debt securities is payable in a foreign currency or currencies or a foreign currency unit or units, we will provide you with information on the restrictions, elections, general tax considerations, specific terms and other information with respect to that issue of debt securities and such foreign currency or currencies or foreign currency unit or units in the applicable prospectus supplement.

Transfer and Exchange

Each debt security will be represented by either one or more global securities registered in the name of The Depository Trust Company (the “*depository*”) or a nominee of the depository (we will refer to any such debt security as a “*global debt security*”), or a certificate issued in definitive registered form (we will refer to any debt security represented by a certificate as a “*certificated debt security*”) as set forth in the applicable prospectus supplement. Except as set forth below, global debt securities will not be issuable in certificated form.

Certificated Debt Securities

You may transfer or exchange certificated debt securities at any office we maintain for this purpose in accordance with the terms of the indenture. No service charge will be made for any transfer or exchange of certificated debt securities, but we may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection with a transfer or exchange.

You may effect the transfer of certificated debt securities and the right to receive the principal of, premium and interest on certificated debt securities only by surrendering the certificate representing those certificated debt securities and either reissuance by us or the trustee of the certificate to the new holder or the issuance by us or the trustee of a new certificate to the new holder.

Global Debt Securities and Book-Entry System

Each global debt security will be deposited with, or on behalf of, the depository, and registered in the name of the depository or a nominee of the depository. Beneficial interests in global debt securities will not be issuable in certificated form unless (i) the depository has notified us that it is unwilling or unable to continue as depository for such global debt security or has ceased to be qualified to act as such as required by the indenture and we fail to appoint a successor depository within 90 days of such event, (ii) we determine, in our sole discretion, not to have such securities represented by one or more global securities or (iii) any other circumstances shall exist, in addition to or in lieu of those described above, as may be described in the applicable prospectus supplement. Unless and until a global debt security is exchanged for certificated debt securities under the limited circumstances described in the previous sentence, a global debt security may not be transferred except as a whole by the depository to its nominee or by the nominee to the depository, or by the depository or its nominee to a successor depository or to a nominee of the successor depository.

Covenants

We will set forth in the applicable prospectus supplement any restrictive covenants applicable to any issue of debt securities.

No Protection In the Event of a Change of Control

Unless we state otherwise in the applicable prospectus supplement, the debt securities will not contain any provisions which 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) which could adversely affect holders of debt securities.

Consolidation, Merger and Sale of Assets

We may not consolidate with or merge with or into, or convey, transfer or lease all or substantially all of our assets to any person (a *successor person*) unless:

- We are the surviving corporation or the successor person (if other than us) is a corporation organized and validly existing under the laws of any U.S. domestic jurisdiction and expressly assumes our obligations on the debt securities and under the indenture; and
- immediately after giving effect to the transaction, no default or event of default, shall have occurred and be continuing.

Notwithstanding the above, any of our subsidiaries may consolidate with, merge into or transfer all or part of its properties to us.

Events of Default

“*Event of Default*” means with respect to any series of debt securities, any of the following:

- default in the payment of any interest upon any debt security of that series when it becomes due and payable, and continuance of such default for a period of 30 days (unless the entire amount of the payment is deposited by us with the trustee or with a paying agent prior to the expiration of the 30-day period);
- default in the payment of principal of any security of that series at its maturity;
- default in the performance or breach of any covenant by us in the indenture (other than defaults described above or defaults relating to a covenant that has been included in the indenture solely for the benefit of a series of debt securities other than that series), which default continues uncured for a period of 60 days after we receive written notice from the trustee, or we and the trustee receive written notice from the holders of not less than 25% in principal amount of the outstanding debt securities of that series as provided in the indenture;
- certain voluntary or involuntary events of bankruptcy, insolvency or reorganization of our company; and
- any other event of default provided with respect to a series of debt securities, including any events of default relating to guarantors, if any, or subsidiaries that is described in the applicable prospectus supplement.

No event of default with respect to a particular series of debt securities (except as to certain events of bankruptcy, insolvency or reorganization) necessarily constitutes an event of default with respect to any other series of debt securities. The occurrence of certain events of default or an acceleration under the indenture may constitute an event of default under certain indebtedness of ours or our subsidiaries outstanding from time to time.

If an event of default with respect to any series of debt securities at the time outstanding occurs and is continuing (other than an event of default resulting from certain events of bankruptcy, insolvency or reorganization), then the trustee or the holders of not less than 25% in principal amount of the outstanding debt securities of that series may, by a notice in writing to us (and to the trustee if given by the holders), declare to be due and payable immediately the principal of (or, if the debt securities of that series are discount securities, that portion of the principal amount as may be specified in the terms of that series) and accrued and unpaid interest, if any, on all debt securities of that series. In the case of an event of default resulting from certain events of bankruptcy, insolvency or reorganization, the principal amount (or such specified amount) of and accrued and unpaid interest, if any, on all outstanding debt securities will become and be immediately due and payable without any declaration or other act on the part of the trustee or any holder of outstanding debt securities. At any time after a declaration of acceleration with respect to debt securities of any series has been made, but before a judgment or decree for payment of the money due has been obtained by the trustee, the holders of a majority in principal amount of the outstanding debt securities of that series, by written notice to us and the trustee, may rescind and annul such declaration of acceleration and its consequences if all events of default, other than the non-payment of accelerated principal and interest, if any, with respect to debt securities of that series, have been cured or waived as provided in the indenture. We refer you to the prospectus supplement relating to any series of debt securities that are discount securities for the particular provisions relating to acceleration of a portion of the principal amount of such discount securities upon the occurrence of an event of default.

The indenture provides that the trustee will be under no obligation to perform any duty or exercise any of its rights or powers under the indenture unless the trustee receives indemnity satisfactory to it against any cost, liability or expense which might be incurred by it in performing such duty or exercising such right of power. Subject to certain rights of the trustee, the holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to the debt securities of that series.

No holder of any debt security of any series will have any right to institute any proceeding, judicial or otherwise, with respect to the indenture or for the appointment of a receiver or trustee, or for any remedy under the indenture, unless:

- that holder has previously given to the trustee written notice of a continuing event of default with respect to debt securities of that series;
- the holders of not less than 25% in principal amount of the outstanding debt securities of that series have made written request to the trustee to institute the proceedings in respect of such event of default in its own name as trustee under the indenture;
- such holder or holders have offered to the trustee indemnity or security satisfactory to the trustee against the costs, expenses and liabilities which might be incurred by the trustee in compliance with such request;
- the trustee has failed to institute any such proceeding for 60 days after its receipt of such notice, request and offer of indemnity; and
- no direction inconsistent with such written request has been given to the trustee during such 60-day period by holders of a majority in principal amount of the outstanding debt securities of that series.

Notwithstanding any other provision in the indenture, the holder of any debt security will have an absolute and unconditional right to receive payment of the principal of, and any interest on, that debt security on or after the due dates expressed in that debt security (or, in the case of redemption, on the redemption date) and to institute suit for the enforcement of any such payment and such rights shall not be impaired without the consent of such holder.

The indenture requires us, within 120 days after the end of our fiscal year, to furnish to the trustee a statement as to compliance with the indenture from our principal executive officer, principal financial officer or principal accounting officer. If a default or event of default occurs and is continuing with respect to the debt securities of any series and if it is actually known to a responsible officer of the trustee, the trustee shall mail to each holder of the debt securities of that series notice of a default or event of default within 60 days after it occurs or, if later, after a responsible officer of the trustee has knowledge of such default or event of default. The indenture provides that the trustee may withhold notice to the holders of debt securities of any series of any default or event of default (except in payment on any debt securities of that series) with respect to debt securities of that series if the trustee determines in good faith that withholding notice is in the interest of the holders of those debt securities.

Modification and Waiver

We and the trustee may modify and amend or supplement the indenture or the debt securities of one or more series without the consent of any holder of any debt security:

- to add guarantees with respect to debt securities of a series or secure debt securities of a series;
- to surrender any of our rights or powers under the indenture;
- to add covenants or events of default for the benefit of the holders of any series of debt securities;
- to comply with the applicable procedures of the applicable depository;
- to cure any ambiguity, defect or inconsistency;
- to comply with covenants in the indenture described above under the heading “Consolidation, Merger and Sale of Assets”;
- to provide for uncertificated securities in addition to or in place of certificated securities;
- to make any change that does not materially adversely affect the rights of any holder of debt securities;
- to provide for the issuance of and establish the form and terms and conditions of debt securities of any series as permitted by the indenture;
- to effect the appointment of a successor trustee with respect to the debt securities of any series and to add to or change any of the provisions of the indenture to provide for or facilitate administration by more than one trustee;
- to comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act; and
- for certain other reasons set forth in any prospectus supplement.

We may also modify and amend the indenture with the consent of the holders of at least a majority in principal amount of the outstanding debt securities of each series affected by the modifications or amendments. We may not make any modification or amendment without the consent of the holders of each affected debt security then-outstanding if that amendment will:

- reduce the principal amount of debt securities whose holders must consent to an amendment, supplement or waiver;
- reduce the rate of or extend the time for payment of interest (including default interest) on any debt security;
- reduce the principal of, or change the fixed maturity of, any debt security or reduce the amount of, or postpone the date fixed for, the payment of any sinking fund or analogous obligation with respect to any series of debt securities;
- reduce the principal amount of discount securities payable upon acceleration of maturity;
- waive a default in the payment of the principal of, or interest, if any, on any debt security (except a rescission of acceleration of the debt securities of any series by the holders of at least a majority in principal amount of the then-outstanding debt securities of that series and a waiver of the payment default that resulted from such acceleration);

- make the principal of, or any interest on, any debt security payable in currency other than that stated in the debt security;
- make any change to certain provisions of the indenture relating to, among other things, the right of holders of debt securities to receive payment of the principal of, and any interest on, those debt securities and to institute suit for the enforcement of any such payment;
- make any change to certain provisions of the indenture relating to waivers or amendments; or
- waive a redemption payment with respect to any debt security, provided that such redemption is made at our option.

Except for certain specified provisions, the holders of at least a majority in principal amount of the outstanding debt securities of any series may, on behalf of the holders of all debt securities of that series, by written notice to the trustee, waive our compliance with provisions of the indenture or the debt securities with respect to such series. The holders of a majority in principal amount of the outstanding debt securities of any series may, on behalf of the holders of all the debt securities of such series, waive any past default under the indenture with respect to that series and its consequences, except a default in the payment of the principal of, or any interest on, any debt security of that series; provided, however, that the holders of a majority in principal amount of the outstanding debt securities of any series may rescind an acceleration and its consequences, including any related payment default that resulted from the acceleration.

Defeasance of Debt Securities and Certain Covenants in Certain Circumstances

Legal Defeasance

The indenture provides that, unless otherwise provided by the terms of the applicable series of debt securities, we may be discharged from any and all obligations in respect of the debt securities of any series (subject to certain exceptions). We will be so discharged upon the deposit with the trustee, in trust, of money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency other than U.S. dollars, government obligations of the government that issued or caused to be issued such currency, that, through the payment of interest and principal in accordance with their terms, will provide money in an amount sufficient in the opinion of a nationally recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal and interest, if any, on and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those payments in accordance with the terms of the indenture and those debt securities.

This discharge may occur only if, among other things, we have delivered to the trustee an opinion of counsel stating that we have received from, or there has been published by, the United States Internal Revenue Service a ruling or, since the date of execution of the indenture, there has been a change in the applicable United States federal income tax law, in either case to the effect that, and based thereon such opinion shall confirm that, the holders of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit, defeasance and discharge and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit, defeasance and discharge had not occurred.

Defeasance of Certain Covenants

The indenture provides that, unless otherwise provided by the terms of the applicable series of debt securities, upon compliance with certain conditions:

- we may omit to comply with the covenant described under the heading “Consolidation, Merger and Sale of Assets” and certain other covenants set forth in the indenture, as well as any additional covenants which may be set forth in the applicable prospectus supplement; and

- any omission to comply with those covenants will not constitute a default or an event of default with respect to the debt securities of that series (“covenant defeasance”).

The conditions include:

- depositing with the trustee money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency other than U.S. dollars, government obligations of the government that issued or caused to be issued such currency, that, through the payment of interest and principal in accordance with their terms, will provide money in an amount sufficient in the opinion of a nationally recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal of, and interest, if any, on and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those payments in accordance with the terms of the indenture and those debt securities; and
- delivering to the trustee an opinion of counsel to the effect that the holders of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit and related covenant defeasance and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit and related covenant defeasance had not occurred.

Governing Law

The indenture and the debt securities, including any claim or controversy arising out of or relating to the indenture or the securities, will be governed by the laws of the State of New York (without regard to the conflicts of laws provisions thereof other than Section 5-1401 of the General Obligations Law).

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of common stock in one or more series. We may issue warrants independently or together with common stock, and the warrants may be traded separate and apart from our common stock. Each series of warrants will be issued under a warrant agreement, as described in the applicable prospectus supplement. We urge you to read any applicable warrant agreements, because those documents, and not these descriptions, define your rights as a holder of warrants. A copy of the form of warrant agreement reflecting the provisions of the warrants in a particular offering will be filed as an exhibit to a current report on Form 8-K, to be incorporated into the registration statement of which this prospectus constitutes a part prior to the issuance of any warrants.

The applicable prospectus supplement will describe the terms of the warrants offered thereby and the warrant agreement relating to such warrants, including but not limited to the following:

- the offering price or prices;
- the aggregate amount of common stock that may be purchased upon exercise of such warrants and minimum number of warrants that are exercisable;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- the number of securities, if any, with which such warrants are being offered and the number of such warrants being offered with each security;
- the date on and after which such warrants and the related securities, if any, will be transferrable separately;
- the amount of securities purchasable upon exercise of each warrant and the price at which the securities may be purchased upon such exercise, and events or conditions under which the amount of securities may be subject to adjustment;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- the circumstances, if any, which will cause the warrants to be deemed to be automatically exercised;
- any material risk factors, if any, relating to such warrants;
- the identity of any warrant agent; and
- any other terms of such warrants (which shall not be inconsistent with the provisions of the warrant agreement).

The terms of the warrants that we offer may or may not have the same material terms as our currently outstanding warrants.

Prior to the exercise of any warrants, holders of such warrants will not have any rights of holders of the securities purchasable upon such exercise, including the right to receive payments of dividends, if any, on the securities purchasable upon such exercise, statutory appraisal rights or the right to vote such underlying securities. Prospective purchasers of warrants should be aware that material U.S. federal income tax, accounting and other considerations may be applicable to instruments such as warrants.

DESCRIPTION OF PURCHASE CONTRACTS

We may issue purchase contracts for the purchase or sale of common stock, preferred stock or other securities issued by us or by third parties as specified in the applicable prospectus supplement. Each purchase contract will entitle the holder thereof to purchase or sell, and obligate us to sell or purchase on specified dates, such securities at a specified purchase price, which may be based on a formula, all as set forth in the applicable prospectus supplement. We may, however, satisfy our obligations, if any, with respect to any purchase contract by delivering the cash value of such purchase contract or the cash value of the securities otherwise deliverable, as set forth in the applicable prospectus supplement. The applicable prospectus supplement will also specify the methods by which the holders may purchase or sell such securities, and any acceleration, cancellation or termination provisions or other provisions relating to the settlement of a purchase contract. The price per security and the number of securities may be fixed at the time the purchase contracts are entered into or may be determined by reference to a specific formula set forth in the applicable purchase contracts.

The purchase contracts may be issued separately or as part of units consisting of a purchase contract and debt securities or debt obligations of third parties, including U.S. treasury securities, or any other securities described in the applicable prospectus supplement or any combination of the foregoing, securing the holders' obligations to purchase the securities under the purchase contracts, which we refer to herein as "*purchase units*."

The purchase contracts may require holders to secure their obligations under the purchase contracts in a specified manner. The purchase contracts also may require us to make periodic payments to the holders of the purchase contracts or the purchase units, as the case may be, or vice versa, and those payments may be unsecured or pre-funded on some basis.

The prospectus supplement relating to any purchase contracts or purchase units we may offer will contain the specific terms of the purchase contracts or purchase units. These terms may include the following:

- whether the purchase contracts obligate the holder to purchase or sell, or both, our common stock, preferred stock, or debt securities, and the nature and amount of each of those securities, or method of determining those amounts;
- whether the purchase contracts are to be prepaid or not;
- whether the purchase contracts are to be settled by delivery, or by reference or linkage to the value, performance or level of our common stock or preferred stock;
- any acceleration, cancellation, termination or other provisions relating to the settlement of the purchase contracts; and
- whether the purchase contracts will be issued in fully registered global form.

The description in the applicable prospectus supplement of any purchase contract or purchase unit we offer will not necessarily be complete and will be qualified in its entirety by reference to the applicable purchase contract or purchase unit, which will be filed with the SEC if we offer purchase contracts or purchase units. For more information on how you can obtain copies of any purchase contract or purchase unit we may offer, see the section entitled "Where You Can Find More Information". We urge you to read the applicable purchase contract or applicable purchase unit and any applicable prospectus supplement in their entirety.

DESCRIPTION OF RIGHTS

We may issue rights to purchase common stock, preferred stock, or other securities. We may issue rights independently or together with any other offered security, which may or may not be transferable by the security holder. In connection with any offering of rights, we may enter into a standby arrangement with one or more underwriters or other purchasers pursuant to which the underwriters or other purchasers may be required to purchase any securities remaining unsubscribed for after such offering.

The prospectus supplement relating to any rights we may offer will contain the specific terms of the rights. These terms may include the following:

- the price, if any, for the rights;
- the exercise price payable for each common stock, preferred stock, or other securities upon the exercise of the rights;
- the number of rights issued to each security holder;
- the number and terms of each common stock, preferred stock, or other securities which may be purchased per each right;
- the extent to which the rights are transferable;
- any provisions for adjustment of the number or amount of securities receivable upon exercise of the rights or the exercise price of the rights;
- any other terms of the rights, including the terms, procedures and limitations relating to the exchange and exercise of the rights;
- the date on which the right to exercise the rights shall commence, and the date on which the rights shall expire;
- the extent to which the rights may include an over-subscription privilege with respect to unsubscribed securities; and
- if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of rights.

The description in the applicable prospectus supplement of any rights we offer will not necessarily be complete and will be qualified in its entirety by reference to the applicable rights certificate or rights agreement, which will be filed with the SEC if we offer rights. For more information on how you can obtain copies of any rights certificate or rights agreement if we offer rights, see the section entitled "Where You Can Find More Information". We urge you to read the applicable rights certificate, the applicable rights agreement and any applicable prospectus supplement in their entirety.

DESCRIPTION OF UNITS

We may issue units comprised of one or more of the other securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. A unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

The applicable prospectus supplement may describe:

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

The applicable prospectus supplement will describe the terms of any units. The preceding description and any description of units in the applicable prospectus supplement does not purport to be complete and is subject to and is qualified in its entirety by reference to the unit agreement and, if applicable, collateral arrangements and depository arrangements relating to such units.

TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company, located in New York, New York.

ANTI-TAKEOVER CHARTER PROVISIONS AND LAWS

Some features of our certificate of incorporation and bylaws and the Delaware General Corporation Law (the “*DGCL*”), which are further described below, may have the effect of deterring third parties from making takeover bids for control of our company or may be used to hinder or delay a takeover bid. This would decrease the chance that our stockholders would realize a premium over market price for their shares of common stock as a result of a takeover bid. See the section entitled “Risk Factors”.

Limitations on Stockholder Actions

Our certificate of incorporation provides that stockholder action may only be taken at a meeting of the stockholders. Thus, an owner of a majority of the voting power could not take action to replace the board of directors, or any class of directors, without a meeting of the stockholders, nor could he amend the bylaws without presenting the amendment to a meeting of the stockholders. Furthermore, under the provisions of the certificate of incorporation and bylaws, only the board of directors has the power to call a special meeting of stockholders. Therefore, a stockholder, even one who owns a majority of the voting power, may neither replace sitting board of directors members nor amend the bylaws before the next annual meeting of stockholders.

Advance Notice Provisions

Our bylaws establish advance notice procedures for the nomination of candidates for election as directors by stockholders, as well as for other stockholder proposals to be considered at annual meetings. Generally, we must receive a notice of intent to nominate a director or raise any other matter at a stockholder meeting not less than 120 days before the first anniversary of the mailing of our proxy statement for the previous year’s annual meeting. The notice must contain required information concerning the person to be nominated or the matters to be brought before the meeting and concerning the stockholder submitting the proposal.

Delaware Law

We are incorporated in Delaware, and as such are subject to Section 203 of the DGCL, which provides that a corporation may not engage in any business combination with an interested stockholder during the three years after the stockholder becomes an interested stockholder unless:

- the corporation’s board of directors approved in advance either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85 percent of the corporation’s voting stock at the time the transaction commenced; or
- the business combination is approved by the corporation’s board of directors and the affirmative vote of at least two-thirds of the voting stock which is not owned by the interested stockholder.

An interested stockholder is anyone who owns 15% or more of a corporation’s voting stock, or who is an affiliate or associate of the corporation and was the owner of 15% or more of the corporation’s voting stock at any time within the previous three years; and the affiliates and associates of any those persons. Section 203 of the DGCL makes it more difficult for an interested stockholder to implement various business combinations with our Company for a three-year period, although our stockholders may vote to exclude it from the law’s restrictions.

Classified Board

Our certificate of incorporation and bylaws divide our board of directors into three classes with staggered three-year terms. There are currently six directors. Each class is comprised of two directors each. At each annual meeting of stockholders, the terms of one class of directors will expire and the newly nominated directors of that class will be elected for a term of three years. The board of directors will be able to determine the total number of directors constituting the full board of directors and the number of directors in each class, but the total number of directors may not exceed nine nor may the number of directors in any class exceed six. No reduction in the total number of directors or in the number of directors in a given class will have the effect of removing a director from office or reducing the term of any then-sitting director. Stockholders may only remove directors for cause. If the board of directors increases the number of directors in a class, it will be able to fill the vacancies created for the full remaining term of a director in that class even though the term may extend beyond the next annual meeting. The directors will also be able to fill any other vacancies for the full remaining term of the director whose death, resignation or removal caused the vacancy.

A person who has a majority of the voting power at a given meeting will not in any one year be able to replace a majority of the directors since only one class of the directors will stand for election in any one year. As a result, at least two annual meeting elections will be required to change the majority of the directors by the requisite vote of stockholders. The purpose of classifying the board of directors is to provide for a continuing body, even in the face of a person who accumulates a sufficient amount of voting power, whether by ownership or proxy or a combination, to have a majority of the voting power at a given meeting and who may seek to take control of our Company without paying a fair premium for control to all of the owners of our common stock. This will allow the board of directors time to negotiate with such a person and to protect the interests of the other stockholders who may constitute a majority of the shares not actually owned by that person. However, it may also have the effect of deterring third parties from making takeover bids for control of our Company or may be used to hinder or delay a takeover bid.

PLAN OF DISTRIBUTION

We may sell the securities from time to time, by a variety of methods, including the following:

- on any national securities exchange or quotation service on which our securities may be listed at the time of sale, including the NYSE American;
- in the over-the-counter market;
- in transactions otherwise than on such exchange or in the over-the-counter market, which may include privately negotiated transactions and sales directly to one or more purchasers;
- through ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- through purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- through underwriters, broker-dealers, agents, in privately negotiated transactions, or any combination of these methods;
- through short sales;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any of these methods; or
- by any other method permitted pursuant to applicable law.

The securities may be distributed from time to time in one or more transactions:

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

Offers to purchase the securities being offered by this prospectus may be solicited directly. Agents may also be designated to solicit offers to purchase the securities from time to time. Any agent involved in the offer or sale of our securities will be identified in a prospectus supplement.

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

If an underwriter is utilized in the sale of the securities being offered by this prospectus, an underwriting agreement will be executed with the underwriter at the time of sale and the name of any underwriter will be provided in the prospectus supplement that the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, we or the purchasers of securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for which they may act as agent. Unless otherwise indicated in a prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase securities as a principal, and may then resell the securities at varying prices to be determined by the dealer.

Any compensation paid to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers will be provided in the applicable prospectus supplement. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. In compliance with the guidelines of the Financial Industry Regulatory Authority, Inc. (“FINRA”), the maximum amount of underwriting compensation, including underwriting discounts and commissions, to be paid in connection with any offering of securities pursuant to this prospectus may not exceed 8% of the aggregate principal amount of securities offered. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof and to reimburse those persons for certain expenses.

The securities may or may not be listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

If indicated in the applicable prospectus supplement, underwriters or other persons acting as agents may be authorized to solicit offers by institutions or other suitable purchasers to purchase the securities at the public offering price set forth in the prospectus supplement, pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the prospectus supplement. These purchasers may include, among others, commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions. Delayed delivery contracts will be subject to the condition that the purchase of the securities covered by the delayed delivery contracts will not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which the purchaser is subject. The underwriters and agents will not have any responsibility with respect to the validity or performance of these contracts.

We may engage in at-the-market offerings into an existing trading market in accordance with rule 415(a)(4) under the Securities Act. In addition, we may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or others to settle those sales or to close out any related open borrowings of common stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of our common stock. In addition, we may loan or pledge securities to a financial institution or other third party that in turn may sell the securities using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business for which they receive compensation.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered by this prospectus, and any supplement thereto, has been passed upon for us by Thompson Hine LLP, 335 Madison Avenue, 12th Floor, New York, New York 10017-4611.

EXPERTS

The financial statements as of December 31, 2019 and 2018 incorporated in this prospectus by reference to the Annual Report on Form 10-K for the years ended December 31, 2019 and 2018, respectively, have been so incorporated in reliance on the report, which refers to the adoption of new accounting standard ASU No. 2016-02, Leases (Topic 842), as amended, effective January 1, 2019, and which includes an explanatory paragraph as to the Company's ability to continue as a going concern, of Marcum LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth the expenses expected to be incurred by us in connection with the issuance and distribution of the securities being registered.

SEC registration fee	\$ 2,553
FINRA filing fee	(1)
NYSE American listing fee	(1)
Legal fees and expenses	(1)
Accounting fees	(1)
Printing expenses	(1)
Miscellaneous	(1)
Total (2)	<u>\$ (1)</u>

- (1) These fees are calculated based on the securities offered and the number of issuances and accordingly cannot be estimated at this time.
- (2) Does not include any fees or expenses in connection with any subsequent underwritten offering and any prospectus supplements prepared in connection therewith.

Item 15. Indemnification of Directors and Officers.

Section 102(b)(7) of the Delaware General Corporation Law (the “DGCL”) permits a corporation in its certificate of incorporation or an amendment to eliminate or limit the personal liability of its directors or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of law or obtained an improper personal benefit. Our certificate of incorporation provides for this limitation of liability.

Section 145 of the DGCL provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the corporation, to which he or she is a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. Section 145 further provides that in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnify for such expenses which the Court of Chancery or such other court shall deem proper.

Section 145(g) of the DGCL further authorizes a corporation to purchase and maintain insurance on behalf of any indemnified person against any liability asserted against and incurred by such person in any indemnified capacity, or arising out of such person’s status as such, regardless of whether the corporation would otherwise have the power to indemnify under Delaware law.

We have entered into indemnification agreements with each of our directors and executive officers. In general, these agreements provide that we will indemnify the director or executive officer to the fullest extent permitted by law for claims arising in his or her capacity as a director or officer or in connection with his or her service at our request for another corporation or entity.

Article Nine, Section (b), of our certificate of incorporation further provides that no director will be personally liable to us or our stockholders for monetary damages or for any breach of fiduciary duty except for breach of the director's duty of loyalty to us or our stockholders, for acts or omissions not in good faith or involving intentional misconduct or a knowing violation of law, pursuant to Section 174 of the Delaware General Corporation Law (which imposes liability in connection with the payment of certain unlawful dividends, stock purchases or redemptions), or any amendment or successor provision thereto, or for any transaction from which a director derived an improper personal benefit.

The indemnification rights set forth above shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, provision of our certificate of incorporation, our bylaws, agreement, vote of stockholders or disinterested directors or otherwise.

We maintain standard policies of insurance that provide coverage (1) to our directors and officers against loss rising from claims made by reason of breach of duty or other wrongful act and (2) to us with respect to indemnification payments that we may make to such directors and officers.

The foregoing discussion of indemnification merely summarizes certain aspects of indemnification provisions of, and is limited by reference to, the above discussed sections of the DGCL and our certificate of incorporation.

Item 16. Exhibits.

A list of exhibits included as part of this registration statement is set forth in the Exhibit Index and is incorporated herein by reference.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the "Securities Act");
 - (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% 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 (i), (ii) and (iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic 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, as amended (the "Exchange Act") 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 a part of the registration statement;

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at 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 to any purchaser:
 - (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

The undersigned registrant hereby further undertakes:

- (1) for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in 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; and
- (2) To file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Trust Indenture Act; and
- (3) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

Exhibit Index

Exhibit Number	Exhibit Description
1.1*	Form of Underwriting Agreement.
3.1	<u>Amended and Restated Certificate of Incorporation of Navidea Biopharmaceuticals, Inc., as corrected February 18, 1994, and amended June 27, 1994, July 25, 1995, June 3, 1996, March 17, 1999, May 9, 2000, June 13, 2003, July 29, 2004, June 22, 2005, November 20, 2006, December 26, 2007, April 30, 2009, July 27, 2009, August 2, 2010, January 5, 2012, June 26, 2013 and August 18, 2016 (filed as Exhibit 3.1 to the Company's Annual Report on Form 10-K filed March 31, 2017, and incorporated herein by reference).</u>
3.2	<u>Certificate of Amendment to Amended and Restated Certificate of Incorporation of Navidea Biopharmaceuticals, Inc. (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K, filed on April 26, 2019, and incorporated herein by reference).</u>
3.3	<u>Amended and Restated Certificate of Designations, Voting Powers, Preferences, Limitations, Restrictions, and Relative Rights of Series B Cumulative Convertible Preferred Stock (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed June 26, 2013).</u>
3.4	<u>Certificate of Designation of Preferences, Rights and Limitations of Series D Preferred Stock (filed as Exhibit 3.2 to the Company's Current Report on Form 8-K, filed by the Company on September 2, 2020, and incorporated herein by reference).</u>
3.5	<u>Amended and Restated Bylaws dated July 21, 1993, as amended July 18, 1995, May 30, 1996, July 26, 2007, and November 7, 2013 (filed as Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q, filed by the Company on November 12, 2013, and incorporated herein by reference).</u>
3.6	<u>Form of Common Stock Certificate (filed as Exhibit 4.3 to the Company's Registration Statement on Form S-3, filed December 31, 2019, and incorporated herein by reference).</u>
4.1*	Form of Certificate of Designation for the Preferred Stock (together with Preferred Stock Certificate).
4.2*	Form of Warrant Agreement (together with form of Warrant Certificate)
4.3*	Form of Rights Agreement (together with Rights Certificate).
4.4*	Form of Purchase Contract (together with form of Purchase Contract Certificate).
4.5*	Form of Unit Agreement (together with form of Unit Certificate).
4.6	<u>Form of Indenture.</u>
4.7*	Form of Global Note.
5.1	<u>Opinion of Thompson Hine LLP.</u>
23.1	<u>Consent of Thompson Hine LLP (included in Exhibit 5.1).</u>
23.2	<u>Consent of Independent Registered Public Accounting Firm, Marcum LLP.</u>
24.1	<u>Power of Attorney (See signature page).</u>
25.1**	Form T-1 Statement of Eligibility of Trustee under the Indenture.

* To be subsequently filed, if applicable, and incorporated herein by reference by an amendment to this registration statement or by a Current Report on Form 8-K.

** To be filed separately under the electronic form type 305(b)(2) of the Trust Indenture Act of 1939, as amended.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing this registration statement on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Dublin, State of Ohio, on February 8, 2021.

NAVIDEA BIOPHARMACEUTICALS, INC.

/s/ Jed A. Latkin

Jed A. Latkin
Chief Executive Officer, Chief Financial Officer,
and Chief Operating Officer and

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Jed A. Latkin as true and lawful attorney-in-fact and agent, with full power of substitution and re-substitution, for and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-effective and post-effective amendments) to this registration statement, and to sign any registration statement for the same offering covered by this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the U.S. Securities and Exchange Commission ("SEC"), and generally to do all such things in his name and behalf in his or her capacities as officer to enable Navidea Biopharmaceuticals, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the SEC, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, ratifying and confirming all that said attorneys-in-fact and agents, or his or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
<u>/s/ Jed A. Latkin</u> Jed A. Latkin	Chief Executive Officer, Chief Financial Officer, Chief Operating Officer and Director <i>(Principal Executive Officer, Principal Financial Officer and Principal Accounting Officer)</i>	February 8, 2021
<u>/s/ Y. Michael Rice</u> Y. Michael Rice	Director (Chairman)	February 8, 2021
<u>/s/ Claudine Bruck</u> Claudine Bruck, Ph.D.	Director	February 8, 2021
<u>/s/ Adam D. Cutler</u> Adam D. Cutler	Director	February 8, 2021
<u>/s/ S. Kathryn Rouan</u> S. Kathryn Rouan, Ph.D.	Director	February 8, 2021
<u>/s/ Malcolm G. Witter</u> Malcolm G. Witter	Director	February 8, 2021

NAVIDEA BIOPHARMACEUTICALS, INC.

INDENTURE

Dated as of _____, 20____

[Trustee],

Trustee

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NAVIDEA BIOPHARMACEUTICALS, INC.

Reconciliation and tie between Trust Indenture Act of 1939 and
Indenture, dated as of _____, 20__

§ 310(a)(1)	7.10
(a)(2)	7.10
(a)(3)	Not Applicable
(a)(4)	Not Applicable
(a)(5)	7.10
(b)	7.10
§ 311(a)	7.11
(b)	7.11
§ 312(a)	2.6
(b)	10.3
(c)	10.3
§ 313(a)	7.6
(b)(1)	7.6
(b)(2)	7.6
(c)(1)	7.6
(c)(2)	Not Applicable
(c)(3)	Not Applicable
(d)	7.6
§ 314(a)	4.2, 10.5
(b)	Not Applicable
(c)(1)	10.4
(c)(2)	10.4
(c)(3)	Not Applicable
(d)	Not Applicable
(e)	10.5
(f)	Not Applicable
§ 315(a)	7.1
(b)	7.5
(c)	7.1
(d)	7.1
(e)	6.14
§ 316(a)	2.10
(a)(1)(A)	6.12
(a)(1)(B)	6.13
(b)	6.8
§ 317(a)(1)	6.3
(a)(2)	6.4
(b)	2.5
§ 318(a)	10.1

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

Indenture dated as of _____, 20__ between NAVIDEA BIOPHARMACEUTICALS, INC., a company incorporated under the laws of the State of Delaware (“*Company*”), and [Trustee], as trustee (“*Trustee*”).

Each party agrees as follows for the benefit of the other party and for the equal and ratable benefit of the Holders of the Securities issued under this Indenture.

ARTICLE I.
DEFINITIONS AND INCORPORATION BY REFERENCE

Section 1.1. Definitions.

“*Additional Amounts*” means any additional amounts which are required hereby or by any Security, under circumstances specified herein or therein, to be paid by the Company in respect of certain taxes imposed on Holders specified herein or therein and which are owing to such Holders.

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

“*Agent*” means any Registrar, Paying Agent or Notice Agent.

“*Board of Directors*” means the board of directors of the Company or any duly authorized committee thereof.

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

“*Business Day*” means, unless otherwise provided by Board Resolution, Officer’s Certificate or supplemental indenture hereto for a particular Series, any day except a Saturday, Sunday or a legal holiday in The City of New York (or in connection with any payment, the place of payment) on which banking institutions are authorized or required by law, regulation or executive order to close.

“*Capital Stock*” means any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock.

“*Company*” means the party named as such above until a successor, which duly assumes the obligations under the Indenture, replaces it and thereafter means the successor.

“*Company Order*” means a written order signed in the name of the Company by an Officer.

“*Corporate Trust Office*” means the office of the Trustee at which at any particular time its corporate trust business related to this Indenture shall be principally administered.

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

“*Depository*” means, with respect to the Securities of any Series issuable or issued in whole or in part in the form of one or more Global Securities, the person designated as Depository for such Series by the Company, which Depository shall be a clearing agency registered under the Exchange Act; and if at any time there is more than one such person, “Depository” as used with respect to the Securities of any Series shall mean the Depository with respect to the Securities of such Series.

“*Discount Security*” means any Security that provides for an amount less than the stated principal amount thereof to be due and payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.2.

“*Dollars*” and “\$” means the currency of The United States of America.

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

“*Foreign Currency*” means any currency or currency unit issued by a government other than the government of The United States of America.

“*Foreign Government Obligations*” means, with respect to Securities of any Series that are denominated in a Foreign Currency, direct obligations of, or obligations guaranteed by, the government that issued or caused to be issued such currency for the payment of which obligations its full faith and credit is pledged and which are not callable or redeemable at the option of the issuer thereof.

“*GAAP*” means accounting principles generally accepted in the United States of America set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as have been approved by a significant segment of the accounting profession, which are in effect as of the date of determination.

“*Global Security*” or “*Global Securities*” means a Security or Securities, as the case may be, in the form established pursuant to Section 2.2 evidencing all or part of a Series of Securities, issued to the Depository for such Series or its nominee, and registered in the name of such Depository or nominee.

“*Holder*” or “*Securityholder*” means a person in whose name a Security is registered.

“*Indenture*” means this Indenture as amended or supplemented from time to time and shall include the form and terms of particular Series of Securities established as contemplated hereunder.

“*interest*” means, with respect to any Security, any interest on such Security, and with respect to any Discount Security which by its terms bears interest only after Maturity, means interest payable after Maturity.

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

“*Officer*” means the Chief Executive Officer, President, the Chief Financial Officer, the Treasurer or any Assistant Treasurer, the Secretary or any Assistant Secretary, and any Vice President of the Company.

“*Officer’s Certificate*” means a certificate signed by any Officer and delivered to the Trustee.

“*Opinion of Counsel*” means a written opinion of legal counsel. The counsel may be an employee of or counsel to the Company.

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

“*principal*” of a Security means the principal of the Security plus, when appropriate, the premium, if any, on, and any Additional Amounts in respect of, the Security.

“*Responsible Officer*” means any officer of the Trustee in its Corporate Trust Office having responsibility for administration of this Indenture and also means, with respect to a particular corporate trust matter, any other officer to whom any corporate trust matter is referred because of his or her knowledge of and familiarity with a particular subject and who shall have direct responsibility for the administration of this Indenture.

“*SEC*” means the Securities and Exchange Commission.

“*Securities*” means the debentures, notes or other debt instruments of the Company of any Series authenticated and delivered under this Indenture.

“*Series*” or “*Series of Securities*” means each series of debentures, notes or other debt instruments of the Company created pursuant to Sections 2.1 and 2.2 hereof.

“*Stated Maturity*” when used with respect to any Security, means the date specified in such Security as the fixed date on which the principal of such Security or interest is due and payable.

“*Subsidiary*” of any specified person means any corporation, association or other business entity of which more than 50% of the total voting power of shares of Capital Stock entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by such person or one or more of the other Subsidiaries of that person or a combination thereof.

“*TIA*” means the Trust Indenture Act of 1939 (15 U.S. Code §§ 77aaa-77bbb) as in effect on the date of this Indenture, provided, however, that in the event the Trust Indenture Act of 1939 is amended after such date, “*TIA*” means, to the extent required by any such amendment, the Trust Indenture Act as so amended.

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

“*U.S. Government Obligations*” means securities which are direct obligations of, or guaranteed by, The United States of America for the payment of which its full faith and credit is pledged and which are not callable or redeemable at the option of the issuer thereof, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such U.S. Government Obligation or a specific payment of interest on or principal of any such U.S. Government Obligation held by such custodian for the account of the holder of a depository receipt, *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 depository receipt from any amount received by the custodian in respect of the U.S. Government Obligation evidenced by such depository receipt.

Section 1.2. Other Definitions.

<u>TERM</u>	<u>DEFINED IN SECTION</u>
“ <i>Bankruptcy Law</i> ”	6.1
“ <i>Custodian</i> ”	6.1
“ <i>Event of Default</i> ”	6.1
“ <i>Judgment Currency</i> ”	10.16
“ <i>Legal Holiday</i> ”	10.7
“ <i>mandatory sinking fund payment</i> ”	11.1
“ <i>Market Exchange Rate</i> ”	10.15
“ <i>New York Banking Day</i> ”	10.16
“ <i>Notice Agent</i> ”	2.4
“ <i>optional sinking fund payment</i> ”	11.1
“ <i>Paying Agent</i> ”	2.4
“ <i>Registrar</i> ”	2.4
“ <i>Required Currency</i> ”	10.16
“ <i>successor person</i> ”	5.1

Section 1.3. Incorporation by Reference of Trust Indenture Act.

Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture. The following TIA terms used in this Indenture have the following meanings:

“*Commission*” means the SEC.

“*indenture securities*” means the Securities.

“*indenture security holder*” means a Securityholder.

“*indenture to be qualified*” means this Indenture.

“*indenture trustee*” or “*institutional trustee*” means the Trustee.

“*obligor*” on the indenture securities means the Company and any successor obligor upon the Securities.

All other terms used in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule under the TIA and not otherwise defined herein are used herein as so defined.

Section 1.4. Rules of Construction.

Unless the context otherwise requires:

- (a) a term has the meaning assigned to it;
- (b) an accounting term not otherwise defined has the meaning assigned to it in accordance with GAAP;
- (c) “*or*” is not exclusive;
- (d) words in the singular include the plural, and in the plural include the singular; and
- (e) provisions apply to successive events and transactions.

ARTICLE II.
THE SECURITIES

Section 2.1. Issuable in Series.

The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more Series. All Securities of a Series shall be identical except as may be set forth or determined in the manner provided in a Board Resolution, supplemental indenture hereto or Officer’s Certificate detailing the adoption of the terms thereof pursuant to authority granted under a Board Resolution. In the case of Securities of a Series to be issued from time to time, the Board Resolution, Officer’s Certificate or supplemental indenture detailing the adoption of the terms thereof pursuant to authority granted under a Board Resolution may provide for the method by which specified terms (such as interest rate, maturity date, record date or date from which interest shall accrue) are to be determined. Securities may differ between Series in respect of any matters, provided that all Series of Securities shall be equally and ratably entitled to the benefits of the Indenture.

Section 2.2. Establishment of Terms of Series of Securities.

At or prior to the issuance of any Securities within a Series, the following shall be established (as to the Series generally, in the case of Subsection 2.2.1 and either as to such Securities within the Series or as to the Series generally in the case of Subsections 2.2.2 through 2.2.23) by or pursuant to a Board Resolution, and set forth or determined in the manner provided in a Board Resolution, supplemental indenture hereto or Officer’s Certificate:

- 2.2.1. the title (which shall distinguish the Securities of that particular Series from the Securities of any other Series) and ranking (including the terms of any subordination provisions) of the Series;
- 2.2.2. the price or prices (expressed as a percentage of the principal amount thereof) at which the Securities of the Series will be issued;
- 2.2.3. any limit upon the aggregate principal amount of the Securities of the Series which may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the Series pursuant to Section 2.7, 2.8, 2.11, 3.6 or 9.6);
- 2.2.4. the date or dates on which the principal of the Securities of the Series is payable;
- 2.2.5. the rate or rates (which may be fixed or variable) per annum or, if applicable, the method used to determine such rate or rates (including, but not limited to, any commodity, commodity index, stock exchange index or financial index) at which the Securities of the Series shall bear interest, if any, the date or dates from which such interest, if any, shall accrue, the date or dates on which such interest, if any, shall commence and be payable and any regular record date for the interest payable on any interest payment date;
- 2.2.6. the place or places where the principal of and interest, if any, on the Securities of the Series shall be payable, where the Securities of such Series may be surrendered for registration of transfer or exchange and where notices and demands to or upon the Company in respect of the Securities of such Series and this Indenture may be delivered, and the method of such payment, if by wire transfer, mail or other means;
- 2.2.7. if applicable, the period or periods within which, the price or prices at which and the terms and conditions upon which the Securities of the Series may be redeemed, in whole or in part, at the option of the Company;
- 2.2.8. the obligation, if any, of the Company to redeem or purchase the Securities of the Series pursuant to any sinking fund or analogous provisions or at the option of a Holder thereof and the period or periods within which, the price or prices at which and the terms and conditions upon which Securities of the Series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;
- 2.2.9. the dates, if any, on which and the price or prices at which the Securities of the Series will be repurchased by the Company at the option of the Holders thereof and other detailed terms and provisions of such repurchase obligations;
- 2.2.10. if other than denominations of \$2,000 and integral multiples of \$1,000 in excess thereof, the denominations in which the Securities of the Series shall be issuable;
- 2.2.11. the forms of the Securities of the Series and whether the Securities will be issuable as Global Securities;
- 2.2.12. if other than the principal amount thereof, the portion of the principal amount of the Securities of the Series that shall be payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.2;
- 2.2.13. the currency of denomination of the Securities of the Series, which may be Dollars or any Foreign Currency, and if such currency of denomination is a composite currency, the agency or organization, if any, responsible for overseeing such composite currency;
- 2.2.14. the designation of the currency, currencies or currency units in which payment of the principal of and interest, if any, on the Securities of the Series will be made;

2.2.15. if payments of principal of or interest, if any, on the Securities of the Series are to be made in one or more currencies or currency units other than that or those in which such Securities are denominated, the manner in which the exchange rate with respect to such payments will be determined;

2.2.16. the manner in which the amounts of payment of principal of or interest, if any, on the Securities of the Series will be determined, if such amounts may be determined by reference to an index based on a currency or currencies or by reference to a commodity, commodity index, stock exchange index or financial index;

2.2.17. the provisions, if any, relating to any security provided for the Securities of the Series;

2.2.18. any addition to, deletion of or change in the Events of Default which applies to any Securities of the Series and any change in the right of the Trustee or the requisite Holders of such Securities to declare the principal amount thereof due and payable pursuant to Section 6.2;

2.2.19. any addition to, deletion of or change in the covenants set forth in Articles IV or V which applies to Securities of the Series;

2.2.20. any Depositaries, interest rate calculation agents, exchange rate calculation agents or other agents with respect to Securities of such Series if other than those appointed herein;

2.2.21. the provisions, if any, relating to conversion or exchange of any Securities of such Series, including if applicable, the conversion or exchange price, the conversion or exchange period, the securities or other property into which the Securities will be convertible, provisions as to whether conversion or exchange will be mandatory, at the option of the Holders thereof or at the option of the Company, the events requiring an adjustment of the conversion price or exchange price and provisions affecting conversion or exchange if such Series of Securities are redeemed;

2.2.22. any other terms of the Series (which may supplement, modify or delete any provision of this Indenture insofar as it applies to such Series), including any terms that may be required under applicable law or regulations or advisable in connection with the marketing of Securities of that Series; and

2.2.23. whether any of the Company's direct or indirect Subsidiaries will guarantee the Securities of that Series, including the terms of subordination, if any, of such guarantees.

All Securities of any one Series need not be issued at the same time and may be issued from time to time, consistent with the terms of this Indenture, if so provided by or pursuant to the Board Resolution, supplemental indenture hereto or Officer's Certificate referred to above.

Section 2.3. Execution and Authentication.

Two Officers shall sign the Securities for the Company by manual or facsimile signature.

If an Officer whose signature is on a Security no longer holds that office at the time the Security is authenticated, the Security shall nevertheless be valid.

A Security shall not be valid until authenticated by the manual signature of the Trustee or an authenticating agent. The signature shall be conclusive evidence that the Security has been authenticated under this Indenture.

The Trustee shall at any time, and from time to time, authenticate Securities for original issue in the principal amount provided in the Board Resolution, supplemental indenture hereto or Officer's Certificate, upon receipt by the Trustee of a Company Order. Each Security shall be dated the date of its authentication.

The aggregate principal amount of Securities of any Series outstanding at any time may not exceed any limit upon the maximum principal amount for such Series set forth in the Board Resolution, supplemental indenture hereto or Officer's Certificate delivered pursuant to Section 2.2, except as provided in Section 2.8.

Prior to the issuance of Securities of any Series, the Trustee shall have received and (subject to Section 7.2) shall be fully protected in conclusively relying on: (a) the Board Resolution, supplemental indenture hereto or Officer's Certificate delivered pursuant to Section 2.2 establishing the form of the Securities of that Series or of Securities within that Series and the terms of the Securities of that Series or of Securities within that Series, (b) an Officer's Certificate complying with Section 10.4, and (c) an Opinion of Counsel complying with Section 10.4.

The Trustee shall have the right, but not the obligation, to decline to authenticate and deliver any Securities of such Series: (a) if the Trustee, being advised by counsel, determines that such action may not be taken lawfully; or (b) if the Trustee in good faith determines that such action would expose the Trustee to personal liability to Holders of any then outstanding Series of Securities.

The Trustee may appoint an authenticating agent acceptable to the Company to authenticate Securities. An authenticating agent may authenticate Securities whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such agent. An authenticating agent has the same rights as an Agent to deal with the Company or an Affiliate of the Company.

Section 2.4. Registrar and Paying Agent.

The Company shall maintain, with respect to each Series of Securities, at the place or places specified with respect to such Series pursuant to Section 2.2, an office or agency where Securities of such Series may be presented or surrendered for payment ("*Paying Agent*"), where Securities of such Series may be surrendered for registration of transfer or exchange ("*Registrar*") and where notices and demands to or upon the Company in respect of the Securities of such Series and this Indenture may be delivered ("*Notice Agent*"). The Registrar shall keep a register with respect to each Series of Securities and to their transfer and exchange. The Company will give prompt written notice to the Trustee of the name and address, and any change in the name or address, of each Registrar, Paying Agent or Notice Agent. If at any time the Company shall fail to maintain any such required Registrar, Paying Agent or Notice Agent or shall fail to furnish the Trustee with the name and address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, surrenders, notices and demands.

The Company may also from time to time designate one or more co-registrars, additional paying agents or additional notice agents and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligations to maintain a Registrar, Paying Agent and Notice Agent in each place so specified pursuant to Section 2.2 for Securities of any Series for such purposes. The Company will give prompt written notice to the Trustee of any such designation or rescission and of any change in the name or address of any such co-registrar, additional paying agent or additional notice agent. The term "*Registrar*" includes any co-registrar; the term "*Paying Agent*" includes any additional paying agent; and the term "*Notice Agent*" includes any additional notice agent. The Company or any of its Affiliates may serve as Registrar or Paying Agent.

The Company hereby appoints the Trustee as the initial Registrar, Paying Agent and Notice Agent for each Series unless another Registrar, Paying Agent or Notice Agent, as the case may be, is appointed prior to the time Securities of that Series are first issued.

Section 2.5. Paying Agent to Hold Money in Trust

The Company shall require each Paying Agent other than the Trustee to agree in writing that the Paying Agent will hold in trust, for the benefit of Securityholders of any Series of Securities, or the Trustee, all money held by the Paying Agent for the payment of principal of or interest on the Series of Securities, and will notify the Trustee in writing of any default by the Company in making any such payment. While any such default continues, the Trustee may require a Paying Agent to pay all money held by it to the Trustee. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee. Upon payment over to the Trustee, the Paying Agent (if other than the Company or a Subsidiary of the Company) shall have no further liability for the money. If the Company or a Subsidiary of the Company acts as Paying Agent, it shall segregate and hold in a separate trust fund for the benefit of Securityholders of any Series of Securities all money held by it as Paying Agent. Upon any bankruptcy, reorganization or similar proceeding with respect to the Company, the Trustee shall serve as Paying Agent for the Securities.

Section 2.6. Securityholder Lists.

The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Securityholders of each Series of Securities and shall otherwise comply with TIA § 312(a). If the Trustee is not the Registrar, the Company shall furnish to the Trustee at least ten days before each interest payment date and at such other times as the Trustee may request in writing a list, in such form and as of such date as the Trustee may reasonably require, of the names and addresses of Securityholders of each Series of Securities.

Section 2.7. Transfer and Exchange.

Where Securities of a Series are presented to the Registrar or a co-registrar with a request to register a transfer or to exchange them for an equal principal amount of Securities of the same Series, the Registrar shall register the transfer or make the exchange if its requirements for such transactions are met. To permit registrations of transfers and exchanges, the Trustee shall authenticate Securities at the Registrar's request. No service charge shall be made for any registration of transfer or exchange (except as otherwise expressly permitted herein), but the Company may require payment of a sum sufficient to cover any transfer tax or similar governmental charge payable in connection therewith (other than any such transfer tax or similar governmental charge payable upon exchanges pursuant to Sections 2.11, 3.6 or 9.6).

Neither the Company nor the Registrar shall be required (a) to issue, register the transfer of, or exchange Securities of any Series for the period beginning at the opening of business fifteen days immediately preceding the mailing of a notice of redemption of Securities of that Series selected for redemption and ending at the close of business on the day of such mailing, or (b) to register the transfer of or exchange Securities of any Series selected, called or being called for redemption as a whole or the portion being redeemed of any such Securities selected, called or being called for redemption in part.

Section 2.8. 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 bond as may be required by each of them to hold itself and any of its agents harmless, then, in the absence of notice to the Company or the Trustee that such Security has been acquired by a bona fide purchaser, the Company shall execute and upon receipt of a Company Order the Trustee shall authenticate and make available for delivery, in lieu of any such destroyed, lost or stolen Security, a new Security of the same Series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

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

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

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

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

Section 2.9. Outstanding Securities.

The Securities outstanding at any time are all the Securities authenticated by the Trustee except for those canceled by the Registrar, those delivered to it for cancellation, those reductions in the interest on a Global Security effected by the Trustee in accordance with the provisions hereof and those described in this Section as not outstanding.

If a Security is replaced pursuant to Section 2.8, it ceases to be outstanding until the Trustee receives proof satisfactory to it that the replaced Security is held by a bona fide purchaser.

If the Paying Agent (other than the Company, a Subsidiary of the Company or an Affiliate of the Company) holds on the Maturity of Securities of a Series money sufficient to pay such Securities payable on that date, then on and after that date such Securities of the Series cease to be outstanding and interest on them ceases to accrue.

The Company may purchase or otherwise acquire the Securities, whether by open market purchases, negotiated transactions or otherwise. A Security does not cease to be outstanding because the Company or an Affiliate of the Company holds the Security.

In determining whether the Holders of the requisite principal amount of outstanding Securities have given any request, demand, authorization, direction, notice, consent or waiver hereunder, the principal amount of a Discount Security that shall be deemed to be outstanding for such purposes shall be the amount of the principal thereof that would be due and payable as of the date of such determination upon a declaration of acceleration of the Maturity thereof pursuant to Section 6.2.

Section 2.10. Treasury Securities.

In determining whether the Holders of the required principal amount of Securities of a Series have concurred in any request, demand, authorization, direction, notice, consent or waiver, Securities of a Series owned by the Company or any Affiliate of the Company shall be disregarded, except that for the purposes of determining whether the Trustee shall be protected in conclusively relying on any such request, demand, authorization, direction, notice, consent or waiver, only Securities of a Series that a Responsible Officer of the Trustee actually knows are so owned shall be so disregarded. Securities so owned which have been pledged in good faith shall not be disregarded if the pledgee establishes to the satisfaction of the Trustee the pledgee's right to deliver any such request, demand, authorization, direction, notice, consent or waiver with respect to the Securities and that the pledgee is not the Company or any other obligor upon the Securities or any Affiliate of the Company or of such other obligor.

Section 2.11. Temporary Securities.

Until definitive Securities are ready for delivery, the Company may prepare and the Trustee shall authenticate temporary Securities upon a Company Order. Temporary Securities shall be substantially in the form of definitive Securities but may have variations that the Company considers appropriate for temporary Securities. Without unreasonable delay, the Company shall prepare and the Trustee upon receipt of a Company Order shall authenticate definitive Securities of the same Series and date of maturity in exchange for temporary Securities. Until so exchanged, temporary securities shall have the same rights under this Indenture as the definitive Securities.

Section 2.12. Cancellation.

The Company at any time may deliver Securities to the Trustee for cancellation. The Registrar and the Paying Agent, if not the Trustee, shall forward to the Trustee any Securities surrendered to them for registration of transfer, exchange or payment. The Trustee shall cancel all Securities surrendered for transfer, exchange, payment, replacement, conversion or cancellation and shall dispose of such canceled Securities (subject to the record retention requirement of the Exchange Act and the Trustee) in accordance with its customary procedures and deliver a certificate of such cancellation to the Company upon written request of the Company. The Company may not issue new Securities to replace Securities that it has paid or delivered to the Trustee for cancellation.

Section 2.13. Defaulted Interest.

If the Company defaults in a payment of interest on a Series of Securities, it may pay the defaulted interest, plus, to the extent permitted by law, any interest payable on the defaulted interest, to the persons who are Securityholders of the Series on a subsequent special record date. The Company shall fix the record date and payment date. At least 10 days before the special record date, the Company shall mail to the Trustee and to each Securityholder of the Series a notice that states the special record date, the payment date and the amount of interest to be paid. The Company may pay defaulted interest in any other lawful manner.

Section 2.14. Global Securities.

2.14.1. Terms of Securities. A Board Resolution, a supplemental indenture hereto or an Officer's Certificate shall establish whether the Securities of a Series shall be issued in whole or in part in the form of one or more Global Securities and the Depositary for such Global Security or Securities.

2.14.2. Transfer and Exchange. Notwithstanding any provisions to the contrary contained in Section 2.7 of the Indenture and in addition thereto, any Global Security shall be exchangeable pursuant to Section 2.7 of the Indenture for Securities registered in the names of Holders other than the Depositary for such Security or its nominee only if (i) such Depositary notifies the Company that it is unwilling or unable to continue as Depositary for such Global Security or if at any time such Depositary ceases to be a clearing agency registered under the Exchange Act, and, in either case, the Company fails to appoint a successor Depositary registered as a clearing agency under the Exchange Act within 90 days of such event or (ii) the Company executes and delivers to the Trustee an Officer's Certificate to the effect that such Global Security shall be so exchangeable. Any Global Security that is exchangeable pursuant to the preceding sentence shall be exchangeable for Securities registered in such names as the Depositary shall direct in writing in an aggregate principal amount equal to the principal amount of the Global Security with like tenor and terms.

Except as provided in this Section 2.14.2, a Global Security may not be transferred except as a whole by the Depositary with respect to such Global Security to a nominee of such Depositary, by a nominee of such Depositary to such Depositary or another nominee of such Depositary or by the Depositary or any such nominee to a successor Depositary or a nominee of such a successor Depositary.

2.14.3. Legend. Any Global Security issued hereunder shall bear a legend in substantially the following form:

"This Security is a Global Security within the meaning of the Indenture hereinafter referred to and is registered in the name of the Depositary or a nominee of the Depositary. This Security is exchangeable for Securities registered in the name of a person other than the Depositary or its nominee only in the limited circumstances described in the Indenture, and may not be transferred except as a whole by the Depositary to a nominee of the Depositary, by a nominee of the Depositary to the Depositary or another nominee of the Depositary or by the Depositary or any such nominee to a successor Depositary or a nominee of such a successor Depositary."

2.14.4. Acts of Holders. The Depositary, as a Holder, may appoint agents and otherwise authorize participants to give or take any request, demand, authorization, direction, notice, consent, waiver or other action which a Holder is entitled to give or take under the Indenture.

2.14.5. Payments. Notwithstanding the other provisions of this Indenture, unless otherwise specified as contemplated by Section 2.2, payment of the principal of and interest, if any, on any Global Security shall be made to the Holder thereof.

2.14.6. Consents, Declaration and Directions. The Company, the Trustee and any Agent shall treat a person as the Holder of such principal amount of outstanding Securities of such Series represented by a Global Security as shall be specified in a written statement of the Depository or by the applicable procedures of such Depository with respect to such Global Security, for purposes of obtaining any consents, declarations, waivers or directions required to be given by the Holders pursuant to this Indenture.

Section 2.15. CUSIP Numbers.

The Company in issuing the Securities may use "CUSIP" numbers (if then generally in use), and, if so, the Trustee shall use "CUSIP" numbers in notices of redemption as a convenience to Holders; provided that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Securities or as contained in any notice of a redemption and that reliance may be placed only on the other elements of identification printed on the Securities, and any such redemption shall not be affected by any defect in or omission of such numbers. The Trustee shall have no liability for any defect in the "CUSIP" numbers as they appear on any Security, notice or elsewhere. The Company will promptly notify the Trustee in writing of any change in the "CUSIP" numbers.

ARTICLE III.
REDEMPTION

Section 3.1. Notice to Trustee.

The Company may, with respect to any Series of Securities, reserve the right to redeem and pay the Series of Securities or may covenant to redeem and pay the Series of Securities or any part thereof prior to the Stated Maturity thereof at such time and on such terms as provided for in such Securities. If a Series of Securities is redeemable and the Company wants or is obligated to redeem prior to the Stated Maturity thereof all or part of the Series of Securities pursuant to the terms of such Securities, it shall notify the Trustee in writing of the redemption date and the principal amount of Series of Securities to be redeemed. The Company shall give the notice to the Trustee at least 15 days before the redemption date, unless a shorter period is satisfactory to the Trustee.

Section 3.2. Selection of Securities to be Redeemed

Unless otherwise indicated for a particular Series by a Board Resolution, a supplemental indenture hereto or an Officer's Certificate, if less than all the Securities of a Series are to be redeemed, the Trustee shall select the Securities of the Series to be redeemed in any manner that the Trustee deems fair and appropriate, including selecting *pro rata*, by lot or other method, unless otherwise required by law or applicable stock exchange requirements, subject, in the case of Global Securities, to the applicable rules and procedures of the Depository. The Trustee shall make the selection from Securities of the Series outstanding not previously called for redemption. The Trustee may select for redemption portions of the principal of Securities of the Series that have denominations larger than \$2,000. Securities of the Series and portions of them it selects shall be in amounts of \$2,000 or integral multiples of \$1,000 in excess thereof or, with respect to Securities of any Series issuable in other denominations pursuant to Section 2.2.10, the minimum principal denomination for each Series and the authorized integral multiples thereof. Provisions of this Indenture that apply to Securities of a Series called for redemption also apply to portions of Securities of that Series called for redemption.

Section 3.3. Notice of Redemption.

Unless otherwise indicated for a particular Series by Board Resolution, a supplemental indenture hereto or an Officer's Certificate, at least 15 days but not more than 60 days before a redemption date, the Company shall mail a notice of redemption by first-class mail to each Holder whose Securities are to be redeemed.

The notice shall identify the Securities of the Series to be redeemed and shall state:

- (a) the redemption date;

- (b) the redemption price;
- (c) the name and address of the Paying Agent and, if applicable, the conversion Agent;
- (d) for convertible Securities, the conversion price;
- (e) if any Securities are being redeemed in part, the portion of the principal amount of such Securities to be redeemed and that, after the redemption date and upon surrender of such Security, a new Security or Securities in principal amount equal to the unredeemed portion of the original Security shall be issued in the name of the Holder thereof upon cancellation of the original Security;
- (f) that Securities of the Series (or portion thereof) called for redemption must be surrendered to the Paying Agent to collect the redemption price;
- (g) that interest on Securities of the Series called for redemption ceases to accrue on and after the redemption date unless the Company defaults in the deposit of the redemption price;
- (h) the CUSIP number, if any, and state that no representation is made as to the correctness or accuracy of the CUSIP number, if any, listed in the SEC's notice or printed on the Securities; and
- (i) any other information as may be required by the terms of the particular Series or the Securities of a Series being redeemed.

At the Company's request, the Trustee shall give the notice of redemption in the Company's name and at its expense, provided, however, that the Company has delivered to the Trustee, at least 10 days (unless a shorter time shall be acceptable to the Trustee) prior to the notice date, an Officer's Certificate requesting that the Trustee give such notice and setting forth the information to be stated in such notice.

Section 3.4. Effect of Notice of Redemption.

Once notice of redemption is mailed as provided in Section 3.3, Securities of a Series called for redemption become due and payable on the redemption date and at the redemption price. Except as otherwise provided in the supplemental indenture, Board Resolution or Officer's Certificate for a Series, a notice of redemption may not be conditional. Upon surrender to the Paying Agent, such Securities shall be paid at the redemption price plus accrued interest to the redemption date other than Securities or portions of Securities called for redemption which have been delivered by the Company to the Registrar for cancellation. The Paying Agent shall return to the Company any money not required for that purpose because of conversion of Securities. The Paying Agent shall return to the Company any money not required for that purpose because of conversion of Securities.

Unless the Company shall default in the payment of Securities (and accrued interest) called for redemption, interest on such Securities shall cease to accrue after the redemption date. Convertible Securities called for redemption shall cease to be convertible after the close of business on the Business Day immediately preceding the redemption date (unless the redemption date is also a record date for an interest payment, in which event they may be converted through the redemption date), unless the Company shall default in the payment of such Securities on the redemption date, in which event the Securities shall remain convertible until paid (together with accrued interest).

Failure to give notice of any defect in the notice to any Holder shall not affect the validity of notice to any Holder other than Securities or portions of Securities called for redemption which have been delivered by the Company to the Registrar for cancellation.

Section 3.5. Deposit of Redemption Price.

On or before 10:00 a.m., New York City time, on the redemption date, the Company shall deposit with the Paying Agent money sufficient to pay the redemption price of and accrued interest, if any, on all Securities to be redeemed on that date.

Section 3.6. Securities Redeemed in Part.

Upon surrender of a Security that is redeemed in part, the Trustee shall authenticate for the Holder a new Security of the same Series and the same maturity equal in principal amount to the unredeemed portion of the Security surrendered.

ARTICLE IV.
COVENANTS

Section 4.1. Payment of Principal and Interest.

The Company covenants and agrees for the benefit of the Holders of each Series of Securities that it will duly and punctually pay the principal of and interest, if any, on the Securities of that Series in accordance with the terms of such Securities and this Indenture. On or before 10:00 a.m., New York City time, on the applicable payment date, the Company shall deposit with the Paying Agent money sufficient to pay the principal of and interest, if any, on the Securities of each Series in accordance with the terms of such Securities and this Indenture. Principal and interest shall be considered paid on the date due if the Paying Agent holds in accordance with this Indenture on that date money sufficient to pay all principal and interest then due and the Paying Agent is not prohibited from paying such money to the Holders on such date pursuant to the terms of this Indenture.

Section 4.2. SEC Reports.

To the extent any Securities of a Series are outstanding, the Company shall deliver to the Trustee within 15 days after it files them with the SEC copies of the annual reports and of the information, documents, and other reports (or copies of such portions of any of the foregoing as the SEC may by rules and regulations prescribe) which the Company is required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act. The Company also shall comply with the other provisions of TIA § 314(a). Reports, information and documents filed with the SEC via the EDGAR system will be deemed to be delivered to the Trustee as of the time of such filing via EDGAR for purposes of this Section 4.2; provided, however, that the Trustee shall have no obligation whatsoever to determine whether or not such information, documents or reports have been filed via EDGAR.

Delivery of reports, information and documents to the Trustee under this Section 4.2 are for informational purposes only and the Trustee's receipt of the foregoing shall not constitute constructive or actual 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 exclusively on Officer's Certificates).

Section 4.3. Compliance Certificate.

To the extent any Securities of a Series are outstanding, the Company shall deliver to the Trustee, within 120 days after the end of each fiscal year of the Company, an Officer's Certificate from its principal executive officer, principal financial officer or principal accounting officer stating that a review of the activities of the Company and its Subsidiaries during the preceding fiscal year has been made under the supervision of the signing Officers with a view to determining whether the Company has kept, observed, performed and fulfilled its obligations under this Indenture, and further stating, as to each such Officer signing such certificate, that to the best of his/her knowledge the Company has kept, observed, performed and fulfilled each and every covenant contained in this Indenture and is not in default in the performance or observance of any of the terms, provisions and conditions hereof (or, if a Default or Event of Default shall have occurred, describing all such Defaults or Events of Default of which the Officer may have knowledge).

Section 4.4. Stay, Extension and Usury Laws.

The Company covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of this Indenture or the Securities; and the Company (to the extent it may lawfully do so) hereby expressly waives all benefit or advantage of any such law and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law has been enacted.

Section 4.5. Corporate Existence.

Subject to Article V, the Company will do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence and rights (charter and statutory); provided, however, that the Company shall not be required to preserve any such right if the Board of Directors shall determine that the preservation thereof is no longer desirable in the conduct of the business of the Company and its Subsidiaries taken as a whole and that the loss thereof is not adverse in any material respect to the Holders.

ARTICLE V.
SUCCESSORS

Section 5.1. When Company May Merge, Etc.

The Company shall not consolidate with or merge with or into, or convey, transfer or lease all or substantially all of its assets to, any person (a *successor person*) unless:

- (a) the Company is the surviving corporation or the successor person (if other than the Company) is a corporation organized and validly existing under the laws of any U.S. domestic jurisdiction and expressly assumes the Company's obligations on the Securities and under this Indenture; and
- (b) immediately after giving effect to the transaction, no Default or Event of Default, shall have occurred and be continuing.

The Company shall deliver to the Trustee prior to the consummation of the proposed transaction an Officer's Certificate to the foregoing effect and an Opinion of Counsel stating that the proposed transaction and any supplemental indenture comply with Section 5.1 of this Indenture.

Notwithstanding the above, any Subsidiary of the Company may consolidate with, merge into or transfer all or part of its properties to the Company. Neither an Officer's Certificate nor an Opinion of Counsel shall be required to be delivered in connection therewith.

Section 5.2. Successor Corporation Substituted.

Upon any consolidation or merger, or any conveyance, transfer, or lease of all or substantially all of the assets of the Company in accordance with Section 5.1, the successor corporation formed by such consolidation or into or with 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 and the Securities with the same effect as if such successor person has been named as the Company herein; provided, however, that the predecessor Company in the case of a conveyance or transfer (other than a lease) shall be released from all obligations and covenants under this Indenture and the Securities.

ARTICLE VI.
DEFAULTS AND REMEDIES

Section 6.1. Events of Default.

“*Event of Default*,” wherever used herein with respect to Securities of any Series, means any one of the following events, unless in the establishing Board Resolution, supplemental indenture or Officer’s Certificate, it is provided that such Series shall not have the benefit of said Event of Default:

(a) default in the payment of any interest on any Security of that Series when it becomes due and payable, and continuance of such default for a period of 30 days (unless the entire amount of such payment is deposited by the Company with the Trustee or with a Paying Agent prior to 10:00 a.m., New York City time, on the 30th day of such period); or

(b) default in the payment of principal of any Security of that Series at its Maturity; or

(c) default in the performance or breach of any covenant of the Company in this Indenture (other than defaults pursuant to paragraphs (a) or (b) above or pursuant to a covenant that has been included in this Indenture solely for the benefit of Series of Securities other than that Series), which default continues uncured for a period of 60 days after there has been given, by registered or certified mail, to the Company by the Trustee or to the Company and the Trustee by the Holders of at least 25% in principal amount of the outstanding Securities of that Series a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a “Notice of Default” hereunder; or

(d) the Company pursuant to or within the meaning of any Bankruptcy Law:

(i) commences a voluntary case,

(ii) consents to the entry of an order for relief against it in an involuntary case,

(iii) consents to the appointment of a Custodian of it or for all or substantially all of its property, or

(iv) makes a general assignment for the benefit of its creditors.

(e) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

(i) is for relief against the Company in an involuntary case,

(ii) appoints a Custodian of the Company or for all or substantially all of its property, or

(iii) orders the liquidation of the Company,

and the order or decree remains unstayed and in effect for 60 days; or

(f) any other Event of Default provided with respect to Securities of that Series, which is specified in a Board Resolution, a supplemental indenture hereto or an Officer’s Certificate, in accordance with Section 2.2.18.

The term “*Bankruptcy Law*” means title 11, U.S. Code or any similar Federal or State law for the relief of debtors. The term “*Custodian*” means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

The Company will, so long as any of the Securities are outstanding, deliver to the Trustee, within 30 days of becoming aware of any Default or Event of Default, an Officer’s Certificate specifying such Default or Event of Default and what action the Company is taking or proposes to take with respect thereto.

Section 6.2. Acceleration of Maturity; Rescission and Annulment

If an Event of Default with respect to Securities of any Series at the time outstanding occurs and is continuing (other than an Event of Default referred to in Section 6.1(d) or (e)) then in every such case the Trustee or the Holders of not less than 25% in principal amount of the outstanding Securities of that Series may declare the principal amount (or, if any Securities of that Series are Discount Securities, such portion of the principal amount as may be specified in the terms of such Securities) of and accrued and unpaid interest, if any, on all of the Securities of that Series to be due and payable immediately, by a notice in writing to the Company (and to the Trustee if given by Holders), and upon any such declaration such principal amount (or specified amount) and accrued and unpaid interest, if any, shall become immediately due and payable. If an Event of Default specified in Section 6.1(d) or (e) shall occur, the principal amount (or specified amount) of and accrued and unpaid interest, if any, on all outstanding Securities shall *ipso facto* become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Holder.

At any time after such a declaration of acceleration with respect to any Series has been made and before a judgment or decree for payment of the money due has been obtained by the Trustee as hereinafter in this Article 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 all Events of Default with respect to Securities of that Series, other than the non-payment of the principal and interest, if any, of Securities of that Series which have become due solely by such declaration of acceleration, have been cured or waived as provided in Section 6.13.

No such rescission shall affect any subsequent Default.

Section 6.3. Collection of Indebtedness and Suits for Enforcement by Trustee

The Company covenants that if

- (a) default is made in the payment of any interest on any Security when such interest becomes due and payable and such default continues for a period of 30 days, or
- (b) default is made in the payment of principal of any Security at the Maturity thereof, or
- (c) default is made in the deposit of any sinking fund payment, if any, when and as due by the terms of a Security,

then, the Company will, upon demand of the Trustee, pay to it, for the benefit of the Holders of such Securities, the whole amount then due and payable on such Securities for principal and interest and, to the extent that payment of such interest shall be legally enforceable, interest on any overdue principal and any overdue interest at the rate or rates prescribed therefor in such Securities, and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel.

If the Company fails to pay such amounts forthwith upon such demand, the Trustee, in its own name and as trustee of an express trust, may institute a judicial proceeding for the collection of the sums so due and unpaid, may prosecute such proceeding to judgment or final decree and may enforce the same against the Company or any other obligor upon such Securities and collect the moneys adjudged or deemed to be payable in the manner provided by law out of the property of the Company or any other obligor upon such Securities, wherever situated.

If an Event of Default with respect to any Securities of any Series occurs and is continuing, the Trustee may in its discretion proceed to protect and enforce its rights and the rights of the Holders of Securities of such Series by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any such rights, whether for the specific enforcement of any covenant or agreement in this Indenture or in aid of the exercise of any power granted herein, or to enforce any other proper remedy.

Section 6.4. Trustee May File Proofs of Claim.

In case of the pendency of any receivership, insolvency, liquidation, bankruptcy, reorganization, arrangement, adjustment, composition or other judicial proceeding relating to the Company or any other obligor upon the Securities or the property of the Company or of such other obligor or their creditors, the Trustee (irrespective of whether the principal of the Securities shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand on the Company for the payment of overdue principal or interest) shall be entitled and empowered, by intervention in such proceeding or otherwise,

(a) to file and prove a claim for the whole amount of principal and interest owing and unpaid in respect of the Securities and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel) and of the Holders allowed in such judicial proceeding, and

(b) to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same,

and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay to the Trustee any amount due it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 7.7.

Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Securities or the rights of any Holder thereof or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding.

Section 6.5. Trustee May Enforce Claims Without Possession of Securities.

All rights of action and claims under this Indenture or the Securities may be prosecuted and enforced by the Trustee without the possession of any of the Securities or the production thereof in any proceeding relating thereto, and any such proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for the payment of the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, be for the ratable benefit of the Holders of the Securities in respect of which such judgment has been recovered.

Section 6.6. Application of Money Collected.

Any money or property 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 or property on account of principal or interest, upon presentation of the Securities and the notation thereon of the payment if only partially paid and upon surrender thereof if fully paid:

First: To the payment of all amounts due to the Trustee under Section 7.7; and

Second: To the payment of the amounts then due and unpaid for principal of and interest on the Securities in respect of which or for the benefit of which such money has been collected, ratably, without preference or priority of any kind, according to the amounts due and payable on such Securities for principal and interest, respectively; and

Third: To the Company.

Section 6.7. Limitation on Suits.

No Holder of any Security of any Series shall have any right to institute any proceeding, judicial or otherwise, with respect to this Indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless

- (a) such Holder has previously given written notice to the Trustee of a continuing Event of Default with respect to the Securities of that Series;
- (b) the Holders of not less than 25% in principal amount of the outstanding Securities of that Series shall have made written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee hereunder;
- (c) such Holder or Holders have offered to the Trustee indemnity or security satisfactory to the Trustee against the costs, expenses and liabilities which might be incurred by the Trustee in compliance with such request;
- (d) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity has failed to institute any such proceeding; and
- (e) 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, intended and expressly covenanted by the Holder of every Security with every other Holder and the Trustee that no one or more of such Holders shall have any right in any manner whatever by virtue of, or by availing of, any provision of this Indenture to affect, disturb or prejudice the rights of any other of such Holders, or to obtain or to seek to obtain priority or preference over any other of such Holders or to enforce any right under this Indenture, except in the manner herein provided and for the equal and ratable benefit of all such Holders of the applicable Series; provided, however, that the Trustee does not have an affirmative duty to ascertain whether or not such actions or forbearances are unduly prejudicial to such Holders.

Section 6.8. Unconditional Right of Holders to Receive Principal and Interest

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 interest, if any, on such Security on the Maturity of such Security, including the Stated Maturity expressed in such Security (or, in the case of redemption, on the redemption date) 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 6.9. Restoration of Rights and Remedies.

If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Company, the Trustee and the Holders shall be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Trustee and the Holders shall continue as though no such proceeding had been instituted.

Section 6.10. Rights and Remedies Cumulative.

Except as otherwise provided with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities in Section 2.8, 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, to the extent permitted by law, prevent the concurrent assertion or employment of any other appropriate right or remedy.

Section 6.11. Delay or Omission Not Waiver.

No delay or omission of the Trustee or of any Holder of any Securities to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of any such Event of Default or an acquiescence therein. Every right and remedy given by this Article or by law to the Trustee or to the Holders may be exercised from time to time, and as often as may be deemed expedient, by the Trustee or by the Holders, as the case may be.

Section 6.12. Control by Holders.

The Holders of a majority in principal amount of the outstanding Securities of any Series shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee, with respect to the Securities of such Series, provided that

- (a) such direction shall not be in conflict with any rule of law or with this Indenture,
- (b) the Trustee may take any other action deemed proper by the Trustee which is not inconsistent with such direction,
- (c) subject to the provisions of Section 6.1, the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall, by a Responsible Officer of the Trustee, determine that the proceeding so directed would involve the Trustee in personal liability, and
- (d) prior to taking any action as directed under this Section 6.12, the Trustee shall be entitled to indemnity satisfactory to it against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

Section 6.13. 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 a Default in the payment of the principal of or interest on any Security of such Series (provided, however, that the Holders of a majority in principal amount of the outstanding Securities of any Series may rescind an acceleration and its consequences, including any related payment default that resulted from such acceleration). 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.

Section 6.14. Undertaking for Costs.

All parties to this Indenture agree, and each Holder of any Security by his acceptance thereof shall be deemed to have agreed, that any court may in its discretion require, in any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken, suffered or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; but the provisions of this Section shall not apply to any suit instituted by the Company, to any suit instituted by the Trustee, to any suit instituted by any Holder, or group of Holders, holding in the aggregate more than 10% in principal amount of the outstanding Securities of any Series, or to any suit instituted by any Holder for the enforcement of the payment of the principal of or interest on any Security on or after the Maturity of such Security, including the Stated Maturity expressed in such Security (or, in the case of redemption, on the redemption date).

ARTICLE VII.
TRUSTEE

Section 7.1. Duties of Trustee.

- (a) If an Event of Default has occurred and is continuing, the Trustee shall exercise the rights and powers vested in it by this Indenture and use the same degree of care and skill in their exercise as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs.
- (b) Except during the continuance of an Event of Default:
- (i) The Trustee need perform only those duties that are specifically set forth in this Indenture and no others.
- (ii) In the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon Officer's Certificates or Opinions of Counsel furnished to the Trustee and conforming to the requirements of this Indenture; however, in the case of any such Officer's Certificates or Opinions of Counsel which by any provisions hereof are specifically required to be furnished to the Trustee, the Trustee shall examine such Officer's Certificates and Opinions of Counsel to determine whether or not they conform to the requirements of this Indenture (but need not confirm or investigate the accuracy of mathematical calculations or other facts stated therein).
- (c) The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:
- (i) This paragraph does not limit the effect of paragraph (b) of this Section.
- (ii) The Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer, unless it is proved that the Trustee was negligent in ascertaining the pertinent facts.
- (iii) The Trustee shall not be liable with respect to any action taken, suffered or omitted to be taken by it with respect to Securities of any Series in good faith in accordance with the direction of the Holders of a majority in principal amount of the outstanding Securities of such Series relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee, under this Indenture with respect to the Securities of such Series in accordance with Section 6.12.
- (d) Every provision of this Indenture that in any way relates to the Trustee is subject to paragraph (a), (b) and (c) of this Section.
- (e) The Trustee may refuse to perform any duty or exercise any right or power unless it receives indemnity satisfactory to it against the costs, expenses and liabilities which might be incurred by it in performing such duty or exercising such right or power.
- (f) The Trustee shall not be liable for interest on any money received by it. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.
- (g) No provision of this Indenture shall require the Trustee to risk its own funds or otherwise incur any financial liability in the performance of any of its duties, or in the exercise of any of its rights or powers, if adequate indemnity against such risk is not assured to the Trustee in its satisfaction.
- (h) The Paying Agent, the Registrar and any authenticating agent shall be entitled to the protections and immunities as are set forth in paragraphs (e), (f) and (g) of this Section and in Section 7.2, each with respect to the Trustee.

Section 7.2. Rights of Trustee.

(a) The Trustee may rely on and shall be protected in acting or refraining from acting upon any document (whether in its original or facsimile form) believed by it to be genuine and to have been signed or presented by the proper person. The Trustee need not investigate any fact or matter stated in the document.

(b) Before the Trustee acts or refrains from acting, it may require an Officer's Certificate or an Opinion of Counsel or both. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on such Officer's Certificate or Opinion of Counsel.

(c) The Trustee may act through agents and shall not be responsible for the misconduct or negligence of any agent appointed with due care. No Depository shall be deemed an agent of the Trustee and the Trustee shall not be responsible for any act or omission by any Depository.

(d) The Trustee shall not be liable for any action it takes or omits to take in good faith which it believes to be authorized or within its rights or powers, provided that the Trustee's conduct does not constitute willful misconduct or negligence.

(e) The Trustee may consult with counsel of its selection and the advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder without willful misconduct or negligence, and in reliance thereon.

(f) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any of the Holders of Securities unless such Holders shall have offered to the Trustee security or indemnity satisfactory to it against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

(g) 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 shall incur no liability or additional liability of any kind by reason of such inquiry or investigation.

(h) The Trustee shall not be deemed to have notice of any Default or Event of Default unless a Responsible Officer of the Trustee has actual knowledge thereof or unless written notice of any event which is in fact such a default is received by the Trustee at the Corporate Trust Office of the Trustee, and such notice references the Securities generally or the Securities of a particular Series and this Indenture.

(i) In no event shall the Trustee be liable to any person for special, punitive, indirect, consequential or incidental loss or damage of any kind whatsoever (including but not limited to lost profits), even if the Trustee has been advised of the likelihood of such loss or damage.

(j) The permissive right of the Trustee to take the actions permitted by this Indenture shall not be construed as an obligation or duty to do so.

(k) The rights, privileges, protections, immunities and benefits given to the Trustee, including, without limitation, its right to be indemnified, are extended to, and shall be enforceable by, the Trustee in each of its capacities hereunder, and each agent, custodian and other Person employed to act hereunder.

(l) The Trustee shall not be required to give any bond or surety in respect of the performance of its powers and duties hereunder.

(m) The Trustee may request that the Company deliver a certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture.

Section 7.2. Individual Rights of Trustee.

The Trustee in its individual or any other capacity may become the owner or pledgee of Securities and may otherwise deal with the Company or an Affiliate of the Company with the same rights it would have if it were not Trustee. Any Agent may do the same with like rights. However, the Trustee is also subject to Sections 7.10 and 7.11.

Section 7.4. Trustee's Disclaimer.

The Trustee makes no representation as to the validity or adequacy of this Indenture or the Securities, it shall not be accountable for the Company's use of the proceeds from the Securities, and it shall not be responsible for any statement in the Securities other than its authentication.

Section 7.5. Notice of Defaults.

If a Default or Event of Default occurs and is continuing with respect to the Securities of any Series and if it is actually known to a Responsible Officer of the Trustee, the Trustee shall mail to each Securityholder of the Securities of that Series notice of a Default or Event of Default within 60 days after it occurs or, if later, after a Responsible Officer of the Trustee has knowledge of such Default or Event of Default. Except in the case of a Default or Event of Default in payment of principal or interest on any Security of any Series, the Trustee may withhold the notice if and so long as it in good faith determines that withholding the notice is in the interests of Securityholders of that Series.

Section 7.6. Reports by Trustee to Holders

Within 60 days after May 15 in each year, the Trustee shall transmit by mail to all Securityholders, as their names and addresses appear on the register kept by the Registrar, a brief report dated as of such reporting date, in accordance with, and to the extent required under, TIA § 313.

A copy of each report at the time of its mailing to Securityholders of any Series shall be filed with the SEC and each national securities exchange on which the Securities of that Series are listed. The Company shall promptly notify the Trustee in writing when Securities of any Series are listed on any national securities exchange or of any delisting thereof.

Section 7.7. Compensation and Indemnity.

The Company shall pay to the Trustee from time to time compensation for its services as the Company and the Trustee shall from time to time agree upon in writing. The Trustee's compensation shall not be limited by any law on compensation of a trustee of an express trust. The Company shall reimburse the Trustee upon request for all reasonable out of pocket expenses incurred by it. Such expenses shall include the reasonable compensation and expenses of the Trustee's agents and counsel.

The Company shall indemnify each of the Trustee and any predecessor Trustee (including the cost of defending itself) against any cost, expense or liability, including taxes (other than taxes based upon, measured by or determined by the income of the Trustee) incurred by it except as set forth in the next paragraph in the performance of its duties under this Indenture as Trustee or Agent. The Trustee shall notify the Company promptly of any claim for which it may seek indemnity. Failure by the Trustee to so notify the Company shall not relieve the Company of its obligations hereunder, unless and to the extent that the Company is materially prejudiced thereby. The Company shall defend the claim and the Trustee shall cooperate in the defense. The Trustee may have one separate counsel and the Company shall pay the reasonable fees and expenses of such counsel. The Company need not pay for any settlement made without its consent, which consent will not be unreasonably withheld. This indemnification shall apply to officers, directors, employees, shareholders and agents of the Trustee.

The Company need not reimburse any expense or indemnify against any loss or liability incurred by the Trustee or by any officer, director, employee, shareholder or agent of the Trustee through willful misconduct or negligence.

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

When the Trustee incurs expenses or renders services after an Event of Default specified in Section 6.1(d) or (e) occurs, the expenses and the compensation for the services are intended to constitute expenses of administration under any Bankruptcy Law.

The provisions of this Section shall survive the termination of this Indenture or the resignation or removal of the Trustee.

Section 7.8. Replacement of Trustee.

A resignation or removal of the Trustee and appointment of a successor Trustee shall become effective only upon the successor Trustee's acceptance of appointment as provided in this Section.

The Trustee may resign with respect to the Securities of one or more Series by so notifying the Company at least 30 days prior to the date of the proposed resignation. The Holders of a majority in principal amount of the Securities of any Series may remove the Trustee with respect to that Series by so notifying the Trustee and the Company. The Company may remove the Trustee with respect to Securities of one or more Series if:

- (a) the Trustee fails to comply with Section 7.10;
- (b) the Trustee is adjudged a bankrupt or an insolvent or an order for relief is entered with respect to the Trustee under any Bankruptcy Law;
- (c) a Custodian or public officer takes charge of the Trustee or its property; or
- (d) the Trustee becomes incapable of acting.

If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Company shall promptly appoint a successor Trustee. Within one year after the successor Trustee takes office, the Holders of a majority in principal amount of the then outstanding Securities may appoint a successor Trustee to replace the successor Trustee appointed by the Company.

If a successor Trustee with respect to the Securities of any one or more Series does not take office within 60 days after the retiring Trustee resigns or is removed, the retiring Trustee, the Company or the Holders of at least a majority in principal amount of the Securities of the applicable Series may petition any court of competent jurisdiction for the appointment of a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Company. Immediately after that, the retiring Trustee shall transfer all property held by it as Trustee to the successor Trustee subject to the lien provided for in Section 7.7, the resignation or removal of the retiring Trustee shall become effective, and the successor Trustee shall have all the rights, powers and duties of the Trustee with respect to each Series of Securities for which it is acting as Trustee under this Indenture. A successor Trustee shall mail a notice of its succession to each Securityholder of each such Series. Notwithstanding replacement of the Trustee pursuant to this Section 7.8, the Company's obligations under Section 7.7 hereof shall continue for the benefit of the retiring Trustee with respect to expenses and liabilities incurred by it for actions taken or omitted to be taken in accordance with its rights, powers and duties under this Indenture prior to such replacement.

Section 7.9. Successor Trustee by Merger, Etc.

If the Trustee consolidates with, merges or converts into, or transfers all or substantially all of its corporate trust business to, another corporation, the successor corporation without any further act shall be the successor Trustee, if such successor corporation is eligible and qualified under Section 7.10.

Section 7.10. Eligibility; Disqualification.

This Indenture shall always have a Trustee who satisfies the requirements of TIA § 310(a)(1), (2) and (5). The Trustee shall always have a combined capital and surplus of at least \$25,000,000 as set forth in its most recent published annual report of condition. The Trustee shall comply with TIA § 310(b).

Section 7.11. Preferential Collection of Claims Against Company.

The Trustee is subject to TIA § 311(a), excluding any creditor relationship listed in TIA § 311(b). A Trustee who has resigned or been removed shall be subject to TIA § 311(a) to the extent indicated.

ARTICLE VIII.
SATISFACTION AND DISCHARGE; DEFEASANCE

Section 8.1. Satisfaction and Discharge of Indenture.

This Indenture shall upon Company Order cease to be of further effect (except as hereinafter provided in this Section 8.1), and the Trustee, at the expense of the Company, shall execute instruments acknowledging satisfaction and discharge of this Indenture, when

(a) either

(i) all Securities theretofore authenticated and delivered (other than Securities that have been destroyed, lost or stolen and that have been replaced or paid as provided in Section 2.8) have been delivered to the Trustee for cancellation; or

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

(1) have become due and payable, or

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

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

(4) are deemed paid and discharged pursuant to Section 8.3, as applicable;

and the Company, in the case of (1), (2) or (3) above, has irrevocably deposited or caused to be deposited with the Trustee as trust funds in trust an amount of money or U.S. Government Obligations sufficient for the purpose of paying and discharging the entire indebtedness on such Securities not theretofore delivered to the Trustee for cancellation, for principal and interest to the date of such deposit (in the case of Securities which have become due and payable on or prior to the date of such deposit) or to the Stated Maturity or redemption date, as the case may be;

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

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

Notwithstanding the satisfaction and discharge of this Indenture, the obligations of the Company to the Trustee under Section 7.7, and, if money shall have been deposited with the Trustee pursuant to clause (a) of this Section, the provisions of Sections 2.4, 2.7, 2.8, 8.2 and 8.5 shall survive.

Section 8.2. Application of Trust Funds; Indemnification

(a) Subject to the provisions of Section 8.5, all money or U.S. Government Obligations deposited with the Trustee pursuant to Section 8.1, all money and U.S. Government Obligations or Foreign Government Obligations deposited with the Trustee pursuant to Section 8.3 or 8.4 and all money received by the Trustee in respect of U.S. Government Obligations or Foreign Government Obligations deposited with the Trustee pursuant to Section 8.3 or 8.4, shall be held in trust and applied by it, in accordance with the provisions of the Securities and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the persons entitled thereto, of the principal and interest for whose payment such money has been deposited with or received by the Trustee or to make mandatory sinking fund payments or analogous payments as contemplated by Sections 8.3 or 8.4.

(b) The Company shall pay and shall indemnify the Trustee against any tax, fee or other charge imposed on or assessed against U.S. Government Obligations or Foreign Government Obligations deposited pursuant to Sections 8.3 or 8.4 or the interest and principal received in respect of such obligations other than any payable by or on behalf of Holders.

(c) The Trustee shall deliver or pay to the Company from time to time upon Company Order any U.S. Government Obligations or Foreign Government Obligations or money held by it as provided in Sections 8.3 or 8.4 which, in the opinion of a nationally recognized firm of independent certified public accountants or investment bank expressed in a written certification thereof delivered to the Trustee, are then in excess of the amount thereof which then would have been required to be deposited for the purpose for which such U.S. Government Obligations or Foreign Government Obligations or money were deposited or received. This provision shall not authorize the sale by the Trustee of any U.S. Government Obligations or Foreign Government Obligations held under this Indenture.

Section 8.3. Legal Defeasance of Securities of any Series.

Unless this Section 8.3 is otherwise specified, pursuant to Section 2.2, to be inapplicable to Securities of any Series, the Company shall be deemed to have paid and discharged the entire indebtedness on all the outstanding Securities of any Series on the 91st day after the date of the deposit referred to in subparagraph (d) hereof, and the provisions of this Indenture, as it relates to such outstanding Securities of such Series, shall no longer be in effect (and the Trustee, at the expense of the Company, shall, upon receipt of a Company Order, execute instruments acknowledging the same), except as to:

(a) the rights of Holders of Securities of such Series to receive, from the trust funds described in subparagraph (d) hereof, (i) payment of the principal of and each installment of principal of and interest on the outstanding Securities of such Series on the Maturity of such principal or installment of principal or interest and (ii) the benefit of any mandatory sinking fund payments applicable to the Securities of such Series on the day on which such payments are due and payable in accordance with the terms of this Indenture and the Securities of such Series;

(b) the provisions of Sections 2.4, 2.7, 2.8, 8.2, 8.3 and 8.5; and

(c) the rights, powers, trust and immunities of the Trustee hereunder and the Company's obligations in connection therewith;

provided that, the following conditions shall have been satisfied:

(d) the Company shall have deposited or caused to be irrevocably deposited (except as provided in Section 8.2(c)) with the Trustee as trust funds in trust for the purpose of making the following payments, specifically pledged as security for and dedicated solely to the benefit of the Holders of such Securities (i) in the case of Securities of such Series denominated in Dollars, cash in Dollars and/or U.S. Government Obligations, or (ii) in the case of Securities of such Series denominated in a Foreign Currency (other than a composite currency), money and/or Foreign Government Obligations, which through the payment of interest and principal in respect thereof in accordance with their terms, will provide (and without reinvestment and assuming no tax liability will be imposed on such Trustee), not later than one day before the due date of any payment of money, an amount in cash, sufficient, in the opinion of a nationally recognized firm of independent public accountants or investment bank expressed in a written certification thereof delivered to the Trustee, to pay and discharge each installment of principal of and interest, if any, on and any mandatory sinking fund payments in respect of all the Securities of such Series on the dates such installments of interest or principal and such sinking fund payments are due;

(e) such deposit will 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;

(f) no Default or Event of Default with respect to the Securities of such Series shall have occurred and be continuing on the date of such deposit or during the period ending on the 91st day after such date;

(g) the Company shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel to the effect that (i) the Company has received from, or there has been published by, the Internal Revenue Service a ruling, or (ii) since the date of execution of this Indenture, there has been a change in the applicable Federal income tax law, in either case to the effect that, and based thereon such Opinion of Counsel shall confirm that, the Holders of the Securities of such Series will not recognize income, gain or loss for Federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to Federal income tax on the same amount and in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred;

(h) the Company shall have delivered to the Trustee an Officer's Certificate stating that the deposit was not made by the Company with the intent of defeating, hindering, delaying or defrauding any other creditors of the Company; and

(i) the Company shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that all conditions precedent provided for relating to the defeasance contemplated by this Section have been complied with.

Section 8.4. Covenant Defeasance.

Unless this Section 8.4 is otherwise specified pursuant to Section 2.2 to be inapplicable to Securities of any Series, the Company may omit to comply with respect to the Securities of any Series with any term, provision or condition set forth under Sections 4.2, 4.3, 4.4, 4.5, and 5.1 as well as any additional covenants specified in a supplemental indenture for such Series of Securities or a Board Resolution or an Officer's Certificate delivered pursuant to Section 2.2 (and the failure to comply with any such covenants shall not constitute a Default or Event of Default with respect to such Series under Section 6.1) and the occurrence of any event specified in a supplemental indenture for such Series of Securities or a Board Resolution or an Officer's Certificate delivered pursuant to Section 2.2.18 and designated as an Event of Default shall not constitute a Default or Event of Default hereunder, with respect to the Securities of such Series, provided that the following conditions shall have been satisfied:

(a) With reference to this Section 8.4, the Company has deposited or caused to be irrevocably deposited (except as provided in Section 8.2(c)) with the Trustee as trust funds in trust for the purpose of making the following payments specifically pledged as security for, and dedicated solely to, the benefit of the Holders of such Securities (i) in the case of Securities of such Series denominated in Dollars, cash in Dollars and/or U.S. Government Obligations, or (ii) in the case of Securities of such Series denominated in a Foreign Currency (other than a composite currency), money and/or Foreign Government Obligations, which through the payment of interest and principal in respect thereof in accordance with their terms, will provide (and without reinvestment and assuming no tax liability will be imposed on such Trustee), not later than one day before the due date of any payment of money, an amount in cash, sufficient, in the opinion of a nationally recognized firm of independent certified public accountants or investment bank expressed in a written certification thereof delivered to the Trustee, to pay and discharge each installment of principal of and interest, if any, on and any mandatory sinking fund payments in respect of the Securities of such Series on the dates such installments of interest or principal and such sinking fund payments are due;

(b) Such deposit will 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;

(c) No Default or Event of Default with respect to the Securities of such Series shall have occurred and be continuing on the date of such deposit;

(d) The Company shall have delivered to the Trustee an Opinion of Counsel to the effect that Holders of the Securities of such Series will not recognize income, gain or loss for federal income tax purposes as a result of such deposit and covenant defeasance and will be subject to federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such deposit and covenant defeasance had not occurred;

(e) The Company shall have delivered to the Trustee an Officer's Certificate stating the deposit was not made by the Company with the intent of defeating, hindering, delaying or defrauding any other creditors of the Company; and

(f) The Company shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that all conditions precedent herein provided for relating to the covenant defeasance contemplated by this Section have been complied with.

Section 8.5. Repayment to Company.

Subject to applicable abandoned property law, the Trustee and the Paying Agent shall pay to the Company upon request any money held by them for the payment of principal and interest that remains unclaimed for two years. After that, Securityholders entitled to the money must look to the Company for payment as general creditors unless an applicable abandoned property law designates another person.

Section 8.6. Reinstatement.

If the Trustee or the Paying Agent is unable to apply any money deposited with respect to Securities of any Series in accordance with Section 8.1 by reason of any legal proceeding or by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the obligations of the Company under this Indenture with respect to the Securities of such Series and under the Securities of such Series shall be revived and reinstated as though no deposit had occurred pursuant to Section 8.1 until such time as the Trustee or the Paying Agent is permitted to apply all such money in accordance with Section 8.1; provided, however, that if the Company has made any payment of principal of or interest on or any Additional Amounts with respect to any Securities because of the reinstatement of its obligations, the Company shall be subrogated to the rights of the Holders of such Securities to receive such payment from the money or U.S. Government Obligations held by the Trustee or Paying Agent after payment in full to the Holders.

ARTICLE IX.
AMENDMENTS AND WAIVERS

Section 9.1. Without Consent of Holders.

The Company and the Trustee may amend or supplement this Indenture or the Securities of one or more Series without the consent of any Securityholder:

- (a) to add guarantees with respect to any Series of Securities or secure any Series of Securities;
- (b) to surrender any of the Company's rights or powers under this Indenture;
- (c) to add covenants or Events of Default for the benefit of the Securityholders of any Series of Securities;
- (d) to comply with the applicable procedures of the Depository;
- (e) to cure any ambiguity, defect or inconsistency;
- (f) to comply with Article V;
- (g) to provide for uncertificated Securities in addition to or in place of certificated Securities;
- (h) to make any change that does not materially adversely affect the rights of any Securityholder;
- (i) to provide for the issuance of and establish the form and terms and conditions of Securities of any Series as permitted by this Indenture;
- (j) 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; or
- (k) to comply with requirements of the SEC in order to effect or maintain the qualification of this Indenture under the TIA.

Section 9.2. With Consent of Holders.

The Company and the Trustee may enter into a supplemental indenture with the written consent of the Holders of at least a majority in principal amount of the outstanding Securities of each Series affected by such supplemental indenture (including consents obtained in connection with a tender offer or exchange offer for the Securities of such Series), for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of any supplemental indenture or of modifying in any manner the rights of the Securityholders of each such Series. Except as provided in Section 6.13, the Holders of at least a majority in principal amount of the outstanding Securities of any Series by written notice to the Trustee (including consents obtained in connection with a tender offer or exchange offer for the Securities of such Series) may waive compliance by the Company with any provision of this Indenture or the Securities with respect to such Series.

It shall not be necessary for the consent of the Holders of Securities under this Section 9.2 to approve the particular form of any proposed supplemental indenture or waiver, but it shall be sufficient if such consent approves the substance thereof. After a supplemental indenture or waiver under this section becomes effective, the Company shall mail to the Holders of Securities affected thereby, a notice briefly describing the supplemental indenture or waiver. Any failure by the Company to mail or publish such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture or waiver.

Section 9.3. Limitations.

Without the consent of each Securityholder affected, an amendment or waiver may not:

- (a) reduce the principal amount of Securities whose Holders must consent to an amendment, supplement or waiver;
- (b) reduce the rate of or extend the time for payment of interest (including default interest) on any Security;
- (c) reduce the principal or change the Stated Maturity of any Security or reduce the amount of, or postpone the date fixed for, the payment of any sinking fund or analogous obligation;
- (d) reduce the principal amount of Discount Securities payable upon acceleration of the maturity thereof;
- (e) waive a Default or Event of Default in the payment of the principal of or interest, if any, on any Security (except a rescission of acceleration of the Securities of any Series by the Holders of at least a majority in principal amount of the outstanding Securities of such Series and a waiver of the payment default that resulted from such acceleration);
- (f) make the principal of or interest, if any, on any Security payable in any currency other than that stated in the Security;
- (g) make any change in Sections 6.8, 6.13 or 9.3 (this sentence); or
- (h) waive a redemption payment with respect to any Security, provided that such redemption is made at the Company's option.

Section 9.4. Compliance with Trust Indenture Act.

Every amendment to this Indenture or the Securities of one or more Series shall be set forth in a supplemental indenture hereto that complies with the TIA as then in effect.

Section 9.5. Revocation and Effect of Consents.

Until an amendment is set forth in a supplemental indenture or a waiver becomes effective, a consent to it by a Holder of a Security is a continuing consent by the Holder and every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security, even if notation of the consent is not made on any Security. However, any such Holder or subsequent Holder may revoke the consent as to his Security or portion of a Security if the Trustee receives the written notice of revocation before the date of the supplemental indenture or the date the waiver becomes effective.

Any amendment or waiver once effective shall bind every Securityholder of each Series affected by such amendment or waiver unless it is of the type described in any of clauses (a) through (h) of Section 9.3. In that case, the amendment or waiver shall bind each Holder of a Security who has consented to it and every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security.

The Company may, but shall not be obligated to, fix a record date for the purpose of determining the Holders entitled to give their consent or take any other action described above or required or permitted to be taken pursuant to this Indenture. If a record date is fixed, then notwithstanding the immediately preceding paragraph, those Persons who were Holders at such record date (or their duly designated proxies), and only those persons, shall be entitled to give such consent or to revoke any consent previously given or take any such action, whether or not such Persons continue to be Holders after such record date. No such consent shall be valid or effective for more than 120 days after such record date.

Section 9.6. Notation on or Exchange of Securities

The Company or the Trustee may place an appropriate notation about an amendment or waiver on any Security of any Series thereafter authenticated. The Company in exchange for Securities of that Series may issue and the Trustee shall authenticate upon request new Securities of that Series that reflect the amendment or waiver.

Section 9.7. Trustee Protected.

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 receive, and (subject to Section 7.1) shall be fully protected in conclusively relying upon, an Officer's Certificate or an Opinion of Counsel or both complying with Section 10.4 and stating that the supplemental indenture is the legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, subject to customary exceptions. The Trustee shall sign all supplemental indentures upon delivery of such an Officer's Certificate or Opinion of Counsel or both, except that the Trustee need not sign any supplemental indenture that adversely affects its rights.

ARTICLE X.
MISCELLANEOUS

Section 10.1. Trust Indenture Act Controls.

If any provision of this Indenture limits, qualifies, or conflicts with another provision which is required or deemed to be included in this Indenture by the TIA, such required or deemed provision shall control.

Section 10.2. Notices.

Any notice or communication by the Company or the Trustee to the other, or by a Holder to the Company or the Trustee, is duly given if in writing and delivered in person or mailed by first-class mail:

if to the Company:

NAVIDEA BIOPHARMACEUTICALS, INC.
4995 Bradenton Avenue, Suite 240,
Dublin, Ohio 43017-3552
Attention: Chief Financial Officer
Telephone: (614) 793-7500

with a copy to:

Thompson Hine LLP
335 Madison Avenue, 12th Floor
New York, New York 10017
Attention: Faith L. Charles
Telephone: (212) 908-3905

if to the Trustee:

The Company or the Trustee by notice to the other may designate additional or different addresses for subsequent notices or communications.

Any notice or communication to a Securityholder shall be mailed by first-class mail to his address shown on the register kept by the Registrar. Failure to mail a notice or communication to a Securityholder of any Series or any defect in it shall not affect its sufficiency with respect to other Securityholders of that or any other Series.

If a notice or communication is mailed or published in the manner provided above, within the time prescribed, it is duly given, whether or not the Securityholder receives it.

If the Company mails a notice or communication to Securityholders, it shall mail a copy to the Trustee and each Agent at the same time.

Notwithstanding any other provision of this Indenture or any Security, where this Indenture or any Security provides for notice of any event (including any notice of redemption) to a Holder of a Global Security (whether by mail or otherwise), such notice shall be sufficiently given to the Depository for such Security (or its designee) pursuant to the customary procedures of such Depository.

Section 10.3. Communication by Holders with Other Holders.

Securityholders of any Series may communicate pursuant to TIA § 312(b) with other Securityholders of that Series or any other Series with respect to their rights under this Indenture or the Securities of that Series or all Series. The Company, the Trustee, the Registrar and anyone else shall have the protection of TIA § 312(c).

Section 10.4. Certificate and Opinion as to Conditions Precedent.

Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company shall furnish to the Trustee:

- (a) an Officer's Certificate stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with; and
- (b) an Opinion of Counsel stating that, in the opinion of such counsel, all such conditions precedent have been complied with.

Section 10.5. Statements Required in Certificate or Opinion.

Each certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture (other than a certificate provided pursuant to TIA § 314(a)(4)) shall comply with the provisions of TIA § 314(e) and shall include:

- (a) a statement that the person making such certificate or opinion has read such covenant or condition;
- (b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;
- (c) a statement that, in the opinion of such person, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and
- (d) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

Section 10.6. Rules by Trustee and Agents.

The Trustee may make reasonable rules for action by or a meeting of Securityholders of one or more Series. Any Agent may make reasonable rules and set reasonable requirements for its functions.

Section 10.7. Legal Holidays.

Unless otherwise provided by Board Resolution, Officer's Certificate or supplemental indenture hereto for a particular Series, a "Legal Holiday" is any day that is not a Business Day. If a payment date is a Legal Holiday at a place of payment, payment may be made at that place on the next succeeding day that is not a Legal Holiday, and no interest shall accrue for the intervening period.

Section 10.8. No Recourse Against Others.

A director, officer, employee or stockholder (past or present), as such, of the Company shall not have any liability for any obligations of the Company under the Securities or the Indenture or for any claim based on, in respect of or by reason of such obligations or their creation. Each Securityholder by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issue of the Securities.

Section 10.9. Counterparts.

This Indenture may be executed in any number of counterparts and by the parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. The exchange of copies of this Indenture and of signature pages by facsimile or PDF transmission shall constitute effective execution and delivery of this Indenture as to the parties hereto and may be used in lieu of the original Indenture for all purposes. Signatures of the parties hereto transmitted by facsimile or PDF shall be deemed to be their original signatures for all purposes.

Section 10.10. Governing Law; Jury Trial Waiver.

THIS INDENTURE AND THE SECURITIES, INCLUDING ANY CLAIM OR CONTROVERSY ARISING OUT OF OR RELATING TO THE INDENTURE OR THE SECURITIES, SHALL BE GOVERNED BY THE LAWS OF THE STATE OF NEW YORK (WITHOUT REGARD TO THE CONFLICTS OF LAWS PROVISIONS THEREOF OTHER THAN SECTION 5-1401 OF THE GENERAL OBLIGATIONS LAW).

EACH OF THE COMPANY AND THE TRUSTEE 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 INDENTURE, THE SECURITIES OR THE TRANSACTION CONTEMPLATED HEREBY.

Section 10.11. No Adverse Interpretation of Other Agreements.

This Indenture may not be used to interpret another indenture, loan or debt agreement of the Company or a Subsidiary of the Company. Any such indenture, loan or debt agreement may not be used to interpret this Indenture.

Section 10.12. Successors.

All agreements of the Company in this Indenture and the Securities shall bind its successor. All agreements of the Trustee in this Indenture shall bind its successor.

Section 10.13. Severability.

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

Section 10.14. Table of Contents, Headings, Etc.

The Table of Contents, Cross Reference Table, and headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part hereof, and shall in no way modify or restrict any of the terms or provisions hereof.

Section 10.15. Securities in a Foreign Currency.

Unless otherwise specified in a Board Resolution, a supplemental indenture hereto or an Officer's Certificate delivered pursuant to Section 2.2 of this Indenture with respect to a particular Series of Securities, whenever for purposes of this Indenture any action may be taken by the Holders of a specified percentage in aggregate principal amount of Securities of all Series or all Series affected by a particular action at the time outstanding and, at such time, there are outstanding Securities of any Series which are denominated more than one currency, then the principal amount of Securities of such Series which shall be deemed to be outstanding for the purpose of taking such action shall be determined by converting any such other currency into a currency that is designated upon issuance of any particular Series of Securities. Unless otherwise specified in a Board Resolution, a supplemental indenture hereto or an Officer's Certificate delivered pursuant to Section 2.2 of this Indenture with respect to a particular Series of Securities, such conversion shall be at the spot rate for the purchase of the designated currency as published in The Financial Times in the "Currency Rates" section (of, if The Financial Times is no longer published, or if such information is no longer available in The Financial Times, such source as may be selected in good faith by the Company) on any date of determination. The provisions of this paragraph shall apply in determining the equivalent principal amount in respect of Securities of a Series denominated in currency other than Dollars in connection with any action taken by Holders of Securities pursuant to the terms of this Indenture.

All decisions and determinations provided for in the preceding paragraph shall, in the absence of manifest error, to the extent permitted by law, be conclusive for all purposes and irrevocably binding upon the Trustee and all Holders.

Section 10.16. Judgment Currency.

The Company agrees, to the fullest extent that it may effectively do so under applicable law, that (a) if for the purpose of obtaining judgment in any court it is necessary to convert the sum due in respect of the principal of or interest or other amount on the Securities of any Series (the "Required Currency") into a currency in which a judgment will be rendered (the "Judgment Currency"), the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Trustee could purchase in The City of New York the Required Currency with the Judgment Currency on the day on which final unappealable judgment is entered, unless such day is not a New York Banking Day, then the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Trustee could purchase in The City of New York the Required Currency with the Judgment Currency on the New York Banking Day preceding the day on which final unappealable judgment is entered and (b) its obligations under this Indenture to make payments in the Required Currency (i) shall not be discharged or satisfied by any tender, any recovery pursuant to any judgment (whether or not entered in accordance with subsection (a)), in any currency other than the Required Currency, except to the extent that such tender or recovery shall result in the actual receipt, by the payee, of the full amount of the Required Currency expressed to be payable in respect of such payments, (ii) shall be enforceable as an alternative or additional cause of action for the purpose of recovering in the Required Currency the amount, if any, by which such actual receipt shall fall short of the full amount of the Required Currency so expressed to be payable, and (iii) shall not be affected by judgment being obtained for any other sum due under this Indenture. For purposes of the foregoing, "New York Banking Day" means any day except a Saturday, Sunday or a legal holiday in The City of New York on which banking institutions are authorized or required by law, regulation or executive order to close.

Section 10.17. Force Majeure.

In no event shall the Trustee be responsible or liable for any failure or delay in the performance of its obligations hereunder arising out of or caused by, directly or indirectly, forces beyond its control, including, without limitation, strikes, work stoppages, accidents, acts of war or terrorism, civil or military disturbances, nuclear or natural catastrophes or acts of God, and interruptions, loss or malfunctions of utilities, communications or computer (software and hardware) services, it being understood that the Trustee shall use reasonable best efforts which are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances.

Section 10.18. U.S.A. Patriot Act.

The parties hereto acknowledge that in accordance with Section 326 of the U.S.A. Patriot Act, the Trustee, like all financial institutions and in order to help fight the funding of terrorism and money laundering, is required to obtain, verify, and record information that identifies each person or legal entity that establishes a relationship or opens an account with the Trustee. The parties to this Indenture agree that they will provide the Trustee with such information as it may request in order for the Trustee to satisfy the requirements of the U.S.A. Patriot Act.

ARTICLE XI.
SINKING FUNDS

Section 11.1. Applicability of Article.

The provisions of this Article shall be applicable to any sinking fund for the retirement of the Securities of a Series if so provided by the terms of such Securities pursuant to Section 2.2 and except as otherwise permitted or required by any form of Security of such Series issued pursuant to this Indenture.

The minimum amount of any sinking fund payment provided for by the terms of the Securities of any Series is herein referred to as a *“mandatory sinking fund payment”* and any other amount provided for by the terms of Securities of such Series is herein referred to as an *“optional sinking fund payment.”* If provided for by the terms of Securities of any Series, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 11.2. Each sinking fund payment shall be applied to the redemption of Securities of any Series as provided for by the terms of the Securities of such Series.

Section 11.2. Satisfaction of Sinking Fund Payments with Securities

The Company may, in satisfaction of all or any part of any sinking fund payment with respect to the Securities of any Series to be made pursuant to the terms of such Securities (1) deliver outstanding Securities of such Series to which such sinking fund payment is applicable (other than any of such Securities previously called for mandatory sinking fund redemption) and (2) apply as credit Securities of such Series to which such sinking fund payment is applicable and which have been repurchased by the Company or redeemed either at the election of the Company pursuant to the terms of such Series of Securities (except pursuant to any mandatory sinking fund) or through the application of permitted optional sinking fund payments or other optional redemptions pursuant to the terms of such Securities, provided that such Securities have not been previously so credited. Such Securities shall be received by the Trustee, together with an Officer’s Certificate with respect thereto, not later than 15 days prior to the date on which the Trustee begins the process of selecting Securities for redemption, and shall be credited for such purpose by the Trustee at the price specified in such Securities for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly. If as a result of the delivery or credit of Securities in lieu of cash payments pursuant to this Section 11.2, the principal amount of Securities of such Series to be redeemed in order to exhaust the aforesaid cash payment shall be less than \$100,000, the Trustee need not call Securities of such Series for redemption, except upon receipt of a Company Order that such action be taken, and such cash payment shall be held by the Trustee or a Paying Agent and applied to the next succeeding sinking fund payment, provided, however, that the Trustee or such Paying Agent shall from time to time upon receipt of a Company Order pay over and deliver to the Company any cash payment so being held by the Trustee or such Paying Agent upon delivery by the Company to the Trustee of Securities of that Series purchased by the Company having an unpaid principal amount equal to the cash payment required to be released to the Company.

Section 11.3. Redemption of Securities for Sinking Fund.

Not less than 45 days (unless otherwise indicated in the Board Resolution, supplemental indenture hereto or Officer’s Certificate in respect of a particular Series of Securities) prior to each sinking fund payment date for any Series of Securities, the Company will deliver to the Trustee an Officer’s Certificate specifying the amount of the next ensuing mandatory sinking fund payment for that Series pursuant to the terms of that Series, the portion thereof, if any, which is to be satisfied by payment of cash and the portion thereof, if any, which is to be satisfied by delivering and crediting of Securities of that Series pursuant to Section 11.2, and the optional amount, if any, to be added in cash to the next ensuing mandatory sinking fund payment, and the Company shall thereupon be obligated to pay the amount therein specified. Not less than 30 days (unless otherwise indicated in the Board Resolution, Officer’s Certificate or supplemental indenture in respect of a particular Series of Securities) before each such sinking fund payment date the Trustee shall select the Securities to be redeemed upon such sinking fund payment date in the manner specified in Section 3.2 and cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in Section 3.3. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Sections 3.4, 3.5 and 3.6.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed as of the day and year first above written.

NAVIDEA BIOPHARMACEUTICALS, INC.

By: _____
Name:
Its:

[Trustee], as Trustee

By: _____
Name:
Its:



ATLANTA CLEVELAND DAYTON WASHINGTON, D.C.
CINCINNATI COLUMBUS NEW YORK

February 8, 2021

Navidea Biopharmaceuticals, Inc.
4995 Bradenton Avenue, Suite 240
Dublin, Ohio 43017

Ladies and Gentlemen:

We have acted as counsel to Navidea Biopharmaceuticals, Inc., a Delaware corporation (the “Company”), in connection with the preparation and filing by the Company of its registration statement on Form S-3 (the “Registration Statement”) with the U.S. Securities and Exchange Commission (the “Commission”) under the Securities Act of 1933, as amended (the “Securities Act”), relating to the offering from time to time, pursuant to Rule 415 under the Securities Act, of (i) shares of the Company’s common stock (“Common Stock”), par value \$0.001 per share (the “Shares”), (ii) shares of preferred stock, par value \$0.001 per share (the “Preferred Stock”), (iii) debt securities (the “Debt Securities”), (iv) warrants to purchase shares of Common Stock or Preferred Stock (the “Warrants”), (v) purchase contracts for the purchase or sale of Common Stock, Preferred Stock, Debt Securities or other securities (the “Purchase Contracts”), (vi) rights to purchase Common Stock, Preferred Stock or other securities (the “Rights”), and (vii) units representing ownership of Common Stock, Preferred Stock, Debt Securities, Warrants or any combination thereof (the “Units”). The Common Stock, the Preferred Stock, the Debt Securities, the Warrants, the Purchase Contracts, the Rights and the Units are collectively referred to as the “Securities” and each individually as a “Security”. The offering of the Securities will be as set forth in the prospectus (the “Prospectus”) contained in the Registration Statement, as supplemented by one or more supplements to the Prospectus.

The Debt Securities will be issued in one or more series pursuant to an Indenture (the “Indenture”) to be entered into between the Company and a trustee to be named therein (the “Trustee”), a form of which is filed as an exhibit to the Registration Statement. The Preferred Stock will be issued in one or more series and the relative powers, designations, preferences, rights and qualifications, limitations or restrictions of such Preferred Stock will be set forth in one or more certificates of designation (each, a “Certificate of Designation”). The Warrants will be issued under one or more warrant agreements (each, a “Warrant Agreement”) to be entered into between the Company and the warrant agent party thereto (the “Warrant Agent”). The Purchase Contracts will be issued pursuant to one or more contracts (each, a “Contract”) for the purchase or sale of Common Stock, Preferred Stock or other securities, to be entered into between the Company and the purchaser party thereto (the “Purchaser”). The Rights will be issued pursuant to one or more rights agreements (each, a “Rights Agreement”), to be entered into between the Company and the rights agent party thereto (the “Rights Agent”). The Units will be issued pursuant to one or more unit agreements (each, a “Unit Agreement”) to be entered into between the Company and the unit agent party thereto (the “Unit Agent”). The Indenture, Certificate of Designation, Warrant Agreement, the Contract, the Rights Agreement and Unit Agreement are hereinafter referred to as the “Securities Documents”.

Item 601 of Regulation S-K and the instructions to Form S-3 require that an opinion of counsel concerning the legality of the securities to be registered be filed as an exhibit to a Form S-3 registration statement if the securities are original issue shares. This opinion is provided in satisfaction of that requirement as it relates to the Registration Statement.

In rendering this opinion, we have examined (a) the Certificate of Incorporation and By-laws of the Company, each as amended and restated through the date hereof; (b) the Registration Statement; (c) the Prospectus; (d) the form of Indenture; and (e) Such other records, instruments, documents and certificates as we have deemed advisable in order to render such opinion.

THOMPSON HINE LLP
ATTORNEYS AT LAW

335 Madison Avenue
12th Floor
New York, New York 10017-4611

www.ThompsonHine.com
O: 212.344.5680
F: 212.344.6101

In such examination, we have assumed: (a) the genuineness of all signatures; (b) the legal capacity of all natural persons; (c) the authenticity of all documents submitted to us as originals; (d) the conformity to original documents of all documents submitted to us as copies; (e) as to matters of fact, the truthfulness of the representations made in the Securities Documents and in certificates of public officials and officers of the Company; (f) that each of the Securities Documents, when executed, will be the legal valid and binding obligations of each party thereto, other than the Company, enforceable against each such party in accordance with its terms; (g) that the issuance and delivery by the Company of the Securities and the execution, delivery and performance by the Company of the Securities Documents do not and will not: (i) contravene its Certificate of Incorporation or By-laws, each as amended and restated through the date hereof; (ii) do not and will not, except with respect to Generally Applicable Law, violate any law, rule or regulation applicable to it; or (iii) result in any conflict with, or breach of, any agreement or document binding on the Company or any of its subsidiaries; and except with respect to Generally Applicable Law, no authorization, approval or other action by, and no notice to or wiling with, any governmental authority or regulatory body or any other third party for the due execution, delivery or performance by the Company of any Securities Document to which it is a party or, if any such authorization, approval, action, notice or filing is required, it has been obtained, taken, given or made and is in full force and effect; (h) at the time of the offering or sale, the Securities and the Securities Documents relating thereto will have been specifically authorized by the Board of Directors of the Company or an authorized committee thereof for issuance and execution and delivery by the Company; (i) any Securities issuable upon conversion, exchange or exercise of any Security being offered will, at the time of such offering or sale, have been duly authorized, created and, if appropriate, reserved for issuance upon such conversion, exchange or exercise; (j) Any Securities consisting of Common Stock, Preferred Stock, or Warrants, including Common Stock or Preferred Stock issuable upon conversion, exchange or exercise of any Security being offered, will, when so issued, have been duly authorized, executed and delivered, against receipt of the consideration approved by the Company, which will be no less than the par value thereof; (k) With respect to the issuance and sale of any Debt Securities, (i) the Indenture has been duly executed and delivered by the Company and the Trustee, and (ii) the Debt Securities, when issued, will be executed, authenticated, issued and delivered against receipt of the consideration therefor approved by the Company and as provided in the Indenture; (l) with respect to the issuance and sale of any Warrants, (i) the related Warrant Agreement will have been duly executed and delivered by the Company and the Warrant Agent, and (ii) the Warrants, when issued, will be executed, countersigned by the Warrant Agent, issued and delivered against receipt of the consideration therefor approved by the Company and as provided in such Warrant Agreement; (m) With respect to the issuance and sale of any Purchase Contracts, (i) the related Contract will have been duly executed and delivered by the Company and the Purchaser, and (ii) the Purchase Contracts, when issued, will be executed, countersigned by the Purchaser, issued and delivered against receipt of the consideration therefor approved by the Company and as provided in such Contract; (n) with respect to the issuance and sale of any Rights, (i) the related Rights Agreement will have been duly executed and delivered by the Company and the Rights Agent, and (ii) the Rights, when issued, will be executed, countersigned by the Rights Agent, issued and delivered against receipt of the consideration therefor approved by the Company and as provided in such Rights Agreement; (o) With respect to the issuance and sale of any Units, (i) the related Unit Agreement will have been duly executed and delivered by the Company and the Unit Agent, and (ii) the Units, when issued, will be executed, countersigned by the Unit Agent, issued and delivered against receipt of the consideration therefor approved by the Company and as provided in such Unit Agreement; (p) that the Registration Statement shall have become effective and such effectiveness shall not have been terminated or withdrawn.

We have not independently established the validity of the foregoing assumptions.

Based upon and subject to the foregoing and such other investigation as we have deemed necessary and subject to the qualifications set forth below, we are of the opinion that:

1. Any Securities consisting of Shares will be validly issued, fully paid and non-assessable.
 2. Any Securities consisting of Preferred Stock will be validly issued, fully paid and non-assessable.
-

3. Any Securities consisting of Debt Securities will constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms and will be entitled to the benefits of the Indenture.
4. Any Securities consisting of Warrants will constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms and will be entitled to the benefits of the Warrant Agreement.
5. Any Securities consisting of Purchase Contracts will constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms and will be entitled to the benefits of the Contract.
6. Any Securities consisting of Rights will constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms and will be entitled to the benefits of the Rights Agreement.
7. Any Securities consisting of Units will constitute legal, valid and binding obligations of the Company enforceable against the Company in accordance with their terms and will be entitled to the benefits of the Unit Agreement.

The foregoing opinions are qualified to the extent that the enforceability of any document, instrument, Securities or Securities Document may be limited by or subject to bankruptcy, insolvency, fraudulent transfer or conveyance, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally, and general equitable or public policy principles. With respect to Securities denominated in a currency other than United States dollars, we express no opinion as to whether a court would award a judgment in a currency other than United States dollars.

Our opinions expressed above are limited to the General Corporation Laws of the State of Delaware and laws of the State of New York, in each case as currently in effect (collectively, "Generally Applicable Law"), and we express no opinion as to the effect on the matters covered by this letter of the laws of any other jurisdiction.

This opinion letter is expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Securities, the Securities Documents, the Registration Statement or the Prospectus.

We hereby consent to being named in the Registration Statement and in the Prospectus under the caption "Legal Matters" and to the use of this opinion for filing with said Registration Statement as Exhibit 5.1 thereto. In giving this consent, we do not hereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Thompson Hine LLP

Thompson Hine LLP

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of Navidea Biopharmaceuticals, Inc. on Form S-3 of our report dated March 18, 2020, which refers to the adoption of new accounting standard ASU No. 2016-02, *Leases (Topic 842)*, as amended, effective January 1, 2019, and which includes an explanatory paragraph as to the Company's ability to continue as a going concern, with respect to our audits of the consolidated financial statements of Navidea Biopharmaceuticals, Inc. as of December 31, 2019 and 2018 and for the years then ended appearing in the Annual Report on Form 10-K of Navidea Biopharmaceuticals, Inc. for the year ended December 31, 2019. We also consent to the reference to our firm under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

/s/ Marcum LLP

Marcum LLP
New Haven, CT
February 8, 2021