

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

**FORM S-3  
REGISTRATION STATEMENT**

UNDER THE SECURITIES ACT OF 1933

**Dermata Therapeutics, Inc.**

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of  
incorporation or organization)

86-3218736

(I.R.S. Employer  
Identification Number)

3525 Del Mar Heights, Rd., #322  
San Diego, CA 92130  
(858) 800-2543

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

Gerald T. Proehl  
Chief Executive Officer  
3525 Del Mar Heights Rd., #322  
San Diego, CA 92130  
Tel: (858) 800-2543

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

*Copies of all communications, including communications sent to the agent for service, to:*

Steven M. Skolnick, Esq.  
Michael J. Lerner, Esq.  
Lowenstein Sandler LLP  
1251 Avenue of the Americas  
New York, New York 10020  
Tel: (212) 262-6700

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

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

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

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

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

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

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

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

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

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the

registration statement shall become effective on such date as the Commission acting pursuant to said Section 8(a), may determine.

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### **Explanatory Note**

This registration statement is a replacement registration statement being filed pursuant to Rule 415(a)(6) under the Securities Act of 1933, as amended (the “Securities Act”), with respect to securities that remain unsold under the registrant’s Registration Statement on Form S-3 (File No. 333-268383), as amended, originally declared effective on November 25, 2022 (the “Prior Registration Statement”). Pursuant to Rule 415(a)(5)(ii) under the Securities Act, by filing this registration statement on Form S-3, the Company may issue and sell securities covered by the Prior Registration Statement until the earlier of (i) the effective date of this registration statement and (ii) May 24, 2026, which is 180 days after the third-year anniversary of the original effective date of the Prior Registration Statement. Pursuant to Rule 415(a)(6) under the Securities Act, the offering of securities under the Prior Registration Statement will be deemed terminated as of the date of effectiveness of this registration statement.

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**The information in this prospectus is not complete and may be changed. A registration statement relating to these securities has been filed with the Securities and Exchange Commission. These securities may not be sold until the registration statement is declared effective. This prospectus is not an offer to sell these securities, and is not soliciting an offer to buy these securities, nor shall there be any sale of these securities, in any state or other jurisdiction where such offer, solicitation or sale is not permitted or would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction.**

**Subject to completion, dated November 21, 2025**

**PRELIMINARY PROSPECTUS**

**Dermata Therapeutics, Inc.**



**\$100,000,000**  
**Common Stock**  
**Preferred Stock**  
**Warrants**  
**Debt Securities**  
**Subscription Rights**  
**Units**

We may offer, issue and sell from time to time together or separately, in one or more offerings, any combination of (i) our common stock, (ii) our preferred stock, which we may issue in one or more series, (iii) warrants, (iv) senior or subordinated debt securities, (v) subscription rights and (vi) units. The debt securities may consist of debentures, notes, or other types of debt. The debt securities, preferred stock, warrants and subscription rights may be convertible into, or exercisable or exchangeable for, common or preferred stock or other securities of ours. The units may consist of any combination of the securities listed above. We may also offer securities as may be issuable upon conversion, redemption, repurchase, exchange or exercise of any securities registered hereunder, including any applicable antidilution provisions.

The aggregate public offering price of the securities that we may offer will not exceed \$100,000,000. We will offer the securities in an amount and on terms that market conditions will determine at the time of the offering. Our common stock and certain of our outstanding warrants (“Warrants”) are currently listed on The Nasdaq Capital Market, or Nasdaq, under the symbols “DRMA” and “DRMAW,” respectively. The last reported sale price for our common stock on November 20, 2025 as quoted on Nasdaq was \$2.48 per share. The last reported sale price for our Warrants on November 20, 2025 as quoted on Nasdaq was \$0.017 per Warrant. You are urged to obtain current market quotations of our common stock and Warrants. As of the date of this prospectus, we have no preferred stock, warrants (other than the Warrants), debt securities, subscription rights or units listed or quoted on any securities exchange or other nationally recognized trading market. Each prospectus supplement will indicate if the securities offered thereby will be listed or quoted on any securities exchange or another nationally recognized trading market.

As of the date of this prospectus, the aggregate market value of our outstanding common stock held by non-affiliates, or the public float, was \$2,258,226, which was calculated based on 910,575 shares of our outstanding common stock held by non-affiliates at a price of \$2.48 per share, the closing price of our common stock on November 20, 2025. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities pursuant to this prospectus with a value of more than one-third of the aggregate market value of our common stock held by non-affiliates in any 12-month period, so long as the aggregate market value of our common stock held by non-affiliates is less than \$75,000,000. During the 12 calendar months prior to, and including, the date of this prospectus, we have not sold any securities pursuant to General Instruction I.B.6 of Form S-3.

**Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus as described on page 7 of this prospectus.**

Should we offer any of the securities described in this prospectus, we will provide you with the specific terms of the particular securities being offered in supplements to this prospectus. You should read this prospectus and any supplement, together with additional information described under the headings “Additional Information” and “Incorporation of Certain Information by Reference” carefully before you invest. This prospectus may not be used to sell securities unless accompanied by a prospectus supplement.

We may sell these securities directly to our stockholders or to other purchasers or through agents on our behalf or through underwriters or dealers as designated from time to time, on a continuous or delayed basis. For additional information on the methods of sale, you should refer to the section titled “Plan of Distribution” in this prospectus. 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, discounts, or over-allotment options will be set forth in a supplement to this prospectus. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a supplement to this prospectus.

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

**The date of this prospectus is                      , 2025.**

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a “shelf” registration process. Under this shelf registration process, we may from time to time offer and sell, in one or more offerings, any or all of the securities described in this prospectus, separately or together, up to an aggregate offering price of \$100,000,000. This prospectus provides you with a general description of the securities we may offer. When we issue securities pursuant to this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading “Additional Information” and “Incorporation of Certain Information by Reference.”

Dermata Therapeutics, Inc. is referred to herein as “Dermata,” “the Company,” “we,” “us” and “our,” unless the context indicates otherwise.

You may only rely on the information contained in or incorporated by reference in this prospectus, and any accompanying prospectus supplement or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone to provide you with different information. This prospectus and any prospectus supplement do not constitute an offer to sell or a solicitation of an offer to buy any securities other than the securities offered by this prospectus or such accompanying prospectus supplement. This prospectus and any prospectus supplement do not constitute an offer to sell or a solicitation of an offer to buy any securities in any circumstances in which such offer or solicitation is unlawful. Neither the delivery of this prospectus or any prospectus supplement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in our affairs since the date of this prospectus or such prospectus supplement or that the information incorporated by reference to this prospectus or any prospectus supplement is correct as of any time after its date.

## PROSPECTUS SUMMARY

The following summary highlights some information from this prospectus. It is not complete and does not contain all of the information that you should consider before making an investment decision. You should read this entire prospectus, including the “Risk Factors” section on page 7 and the disclosures to which that section refers you, the financial statements and related notes and the other more detailed information appearing elsewhere or incorporated by reference into this prospectus before investing in any of the securities described in this prospectus.

### Corporate Overview

We are a scientific leader in dermatology dedicated to the development and commercialization of products that address common and underserved skin conditions. In March 2025, we announced that we achieved statistically significant results from our Phase 3 STAR-1 clinical trial of XYNGARI™, formerly our lead prescription (“Rx”) candidate incorporating our *Spongilla* technology for moderate-to-severe acne. XYNGARI™ demonstrated statistically significant results across all three co-primary endpoints at weeks 4, 8, and 12 when compared with placebo. Following the successful completion of the STAR-1 trial, we conducted a full assessment of the Rx landscape and the continued Rx development pathway for XYNGARI™. In September 2025, after an extensive review of current trends in dermatology, changing patient preferences, and go-to market costs, management, with support from our board of directors, determined that a strategic shift to developing and distributing over the counter (OTC) pharmaceutical dermatology products that are backed by science would be a better path to commercialization with potentially greater financial upside. We believe we can leverage our knowledge of our *Spongilla* technology to create OTC products that are effective and that patients want to use. This repositioning should accelerate our path to commercialization, reduce our regulatory burden, and decrease company expenses, all while being able to address broader consumer segments in the dermatology space.

We believe the dermatology market, from both an OTC and Rx perspective, has seen a substantial shift over the last few years, with an increasing trend of consumers first relying on OTC treatments for common dermatological diseases and conditions such as acne vulgaris (or “acne”), psoriasis vulgaris (or “psoriasis”), and acne rosacea (or “rosacea”), among others. Common dermatology issues, like acne with over 50 million patients in the U.S., are well known by patients with extensive publicly available information and thus patients are more willing to treat these diseases with OTC offerings prior to seeing a dermatologist. Over 70% of patients with acne first choose to try OTC products and wait at least one year before scheduling a visit with a dermatologist. Additionally, due to the lower price point for OTC products, a desire for self-administration, difficulty getting appointments with dermatologists, and enhanced convenience, many consumers are first relying on OTC products to fill their treatment needs. We believe that we can apply the clinical knowledge we have gained over the last ten years to design products that incorporate OTC pharmaceutical ingredients with our *Spongilla* technology to offer patients easy access to affordable and effective OTC treatments for acne, psoriasis, seborrheic dermatitis and other skin diseases and conditions. While this is a major shift in strategy for our company, we believe it is the best path forward to meet our mission of providing patients with efficacious and safe treatment options.

We are currently working with a branding agency to build a new brand identity for our OTC treatments, that represents our core values of providing patients skin care products that are natural but scientifically proven to work. We believe this new brand identity will bridge the gap between OTC products and Rx therapies, allowing patients to take control of their skin care needs and feel confident about the treatment outcomes of the products we plan to offer. As part of this new brand identity, we will be developing visual and verbal identities that bring to life the core essence of the new brand, which incorporates scientifically backed technology that targets the underlying causes of skin diseases with a consumer-friendly approach. We want customers to experience the efficacy and safety we saw in our previous clinical studies and to feel proud of their skin after using our products. We plan to develop and distribute a variety of OTC products that are backed by science but are easily accessible by patients who are more comfortable treating their skin problems independently with readily available OTC therapies. Our core values will remain unchanged during this strategic shift as we strive to provide patients with affordable, safe, and effective treatment options, but now they can directly order our products rather than having to see a physician to be prescribed treatment. We believe patients are seeking greater flexibility and freedom in treating their skin as a majority of patients first turn to OTC products before seeing a dermatologist. With the continued regulatory oversight of the OTC marketplace, patients should maintain confidence in the OTC therapies they can purchase without a prescription.

We view this shift in consumer preferences as a significant benefit for the research we have completed to date. Over the past several years we have gained substantial knowledge of various dermatology diseases and what seems to work in treating these diseases. We plan to leverage this knowledge in creating a whole product line of skin care treatments that patients can access directly. We plan to launch our first product in the middle of 2026 which will consist of a once-weekly, topical acne kit that can be used by patients with mild, moderate, or severe acne. We have gained tremendous understanding of our *Spongilla* technology over the past 8 years and deeply understand the benefits of it being combined with OTC monograph active ingredients to topically treat a variety of dermatological conditions. Our *Spongilla* technology is derived from a naturally grown freshwater sponge, *Spongilla lacustris* or *Spongilla*, which is processed into a fine, purified powder. *Spongilla* is a unique freshwater sponge that only grows in commercial quantities in select regions of the world which give our *Spongilla* technology its distinctive anti-microbial, anti-inflammatory, and mechanical properties. The combination of the proprietary harvesting protocol, developed with our exclusive supplier, and our post-harvest processing procedures produce an ingredient that optimizes the mechanical components as well as the organic components, while eliminating any harmful bacteria that could be found in many freshwater sponges. We believe these unique components used in tandem with an OTC monograph active ingredient could produce a superior OTC product candidate unlike anything currently on the market. We plan for our product candidates to have multiple mechanisms of action for the treatment of skin diseases and conditions.

Prior to our strategic switch to develop and distribute OTC pharmaceutical products, our U.S. Food and Drug Administration (“FDA”) investigational new drug applicant, XYNGARI™, was intended to utilize our *Spongilla* technology as a stand-alone product for the once weekly treatment of a variety of skin diseases, with our initial focus being the treatment of moderate to severe acne. In March 2025, we announced that our XYNGARI™ Phase 3 *Spongilla* Treatment of Acne Research (“STAR-1”) trial topline data met all co-primary endpoints at week 12. XYNGARI™ demonstrated highly statistically significant difference compared with placebo for all primary endpoints after 12 weeks of once weekly treatments. XYNGARI™ patients saw a rapid and sustained therapeutics treatment effect in absolute reduction in inflammatory lesion counts with a -11.4 lesion reduction at week four, -14.7 lesion reduction at week 8, and -16.8 lesion reduction at week 12 compared to -8.6, -10.9, and -13.1 lesion reduction for placebo at weeks 4, 8, and 12, respectively. XYNGARI™ patients also saw a rapid and sustained therapeutics treatment effect in absolute reduction in noninflammatory lesion counts with a -12.4 lesion reduction at week four, -15 lesions reduction at week 8, and -17.3 lesion reduction at week 12 compared to -8.8, -10.4, and -12.4 lesion reduction for placebo at weeks 4, 8, and 12, respectively. Lastly, we observed a sustained therapeutics treatment effect as measured in the investigator’s global assessment (IGA) of acne scale. IGA is measured on a 5-point scale (0-4), with 4 being severe, 3 being moderate, 2 being mild, 1 being almost clear and 0 being clear. To be considered a responder, patients had to achieve a score of 0 (clear) or 1 (almost clear). There were 11.9% of XYNGARI™ patients that were considered a responder at week four, 21.6% of XYNGARI™ patients being considered a responder at week 8, and 29.4% of XYNGARI™ patients being considered a responder at week 12 compared to 6.2%, 8.0%, and 15.2% of placebo patients being considered a responder at weeks 4, 8, and 12, respectively. In fact, approximately 80% of the XYNGARI™ patients had at least a 1-grade change in their acne at the end of the study. The Phase 3 STAR-1 trial was double-blind, randomized, placebo controlled, and enrolled 520 patients with moderate-to-severe acne, age 9 years or older across sites in the United States and Latin America. The co-primary endpoints included absolute reduction in inflammatory and noninflammatory lesion counts and the improvement in investigators global assessment (“IGA”) of acne. Patients were treated once a week for 12 weeks with either XYNGARI™ or placebo and were evaluated monthly. While we saw positive results from the STAR-1 study, after evaluating the prescription dermatology market and regulatory hurdles for approval, we made the strategic decision to withdraw our investigational new drug application (“IND”) for XYNGARI™ for the treatment of acne. We believe this strategic decision will provide us greater flexibility to leverage the many novel features and benefits of our *Spongilla* technology in a variety of skin care products for the OTC marketplace.

We are currently finalizing the components and container closure for our initial acne kit, as well as completing the brand identity, with an expected launch in the middle of 2026. The acne kit will be a topical product applied once weekly by patients at home or in a dermatology or esthetician's office. The product will utilize one active ingredient from FDA's OTC acne monograph, which consist of OTC drugs that are generally recognized by FDA as safe and effective, in predefined doses, for specific therapeutic categories. These OTC active ingredients can be used alone or in combination with other ingredients and marketed as a treatment for various skin diseases or conditions, like acne. For our initial acne kit we plan on incorporating salicylic acid as the active ingredient in combination with our unique *Spongilla* technology to distribute a novel acne treatment kit we believe is unlike anything currently on the market. We have learned that our *Spongilla* technology has a unique combination of mechanical components and chemical components, that provide unique benefits against various skin conditions. The mechanical components of the *Spongilla* powder consist of many microscopic siliceous, needle-like spicules that, when massaged into the skin, penetrate the stratum corneum (the skin's outermost protective layer) and create microchannels into the dermis where pro-inflammatory cytokines and bacteria reside. We believe that the penetration of the spicules also leads to the opening of microchannels, which allow oxygen to enter pilosebaceous glands, helping to kill *C. acnes*, which grow in an anaerobic (without oxygen) environment (*C. acnes* are the bacteria that cause inflammatory lesions in acne patients). The spicules also cause turnover of the top layer of dead skin, thereby increasing collagen production resulting in skin rejuvenation. Additionally, we believe the newly created microchannels provide a conduit for *Spongilla* powder's naturally occurring chemical compounds to be delivered to the dermis and pilosebaceous glands, helping to kill the *C. acnes* and reduce inflammation. In addition to anti-microbial compounds, the *Spongilla* powder also appears to have anti-inflammatory chemical compounds, as demonstrated during *in vitro* experiments, that inhibit inflammation through the reduction of *C. acnes* stimulated IL-8 production and by inhibiting IL-17A and IL-17F expression in human cell lines. Also, during *in vitro* studies of *Spongilla* powder's organic compounds, we observed the inhibition of the lipogenesis of sebocytes, which may translate to a reduction in sebum (an oily and waxy substance produced by the human body's sebaceous glands) production and the oiliness of the skin in patients. We believe the combination of an FDA approved OTC active ingredient with the multiple biological and mechanical effects of our *Spongilla* technology could be important factors in treating multiple inflammatory skin diseases.

On January 17, 2025, we entered into a Clinical Trial Collaboration Agreement (the "Collaboration Agreement") with Revance Therapeutics, Inc. ("Revance") where we intended to conduct a Phase 2a clinical trial to evaluate the topical application of XYNGARI™ followed by the topical application of DAXXIFY® for the treatment of primary axillary hyperhidrosis. In light of our recent strategic shift to develop and distribute OTC pharmaceutical products, we plan to continue to discuss future opportunities for this collaboration with Revance. At this time, the initiation of the Phase 2a clinical trial has been placed on hold. We still believe there is a potential to utilize our *Spongilla* technology for the topical delivery of botulinum toxin, but with our strategic decision to withdraw the XYNGARI™ IND, we are currently evaluating the regulatory and commercial opportunities for this program.

While the initiation of the Phase 2a clinical study is on hold, we continue to evaluate alternative ways to leverage our *Spongilla* technology as a novel platform to enhance the topical delivery of large-molecules, like botulinum toxin, as a needle-free alternative to conventional intradermal injection of large molecules for medical and aesthetic skin conditions. Typically, for facial aesthetics, botulinum toxins are injected into facial muscles to reduce forehead, lateral canthal, and glabella deep lines. While currently only approved for the treatment of axillary hyperhidrosis, intradermal injections of botulinum toxin primarily affect neuromodulatory at the level of cutaneous nerves, sweat glands, and superficial muscle fibers, not via deep muscular paralysis as with intramuscular injections. However, there have been many studies conducted with intradermal injections of botulinum toxin for various aesthetic and medical skin conditions, showing its broad potential application. This is because the mechanism of action of botulinum toxin in the dermis acts to block acetylcholine release from the presynaptic nerve terminals. The primary effects are (1) reduced cholinergic activity (eccrine glands reduce sweating, sebaceous glands reduce sebum production, arrector pili and superficial muscle fibers reduce fine wrinkling resulting in smoother skin), (2) modulation of sensory nerves leading to a reduction in neurogenic inflammation, itching, and erythema (redness), and (3) indirect skin-tightening due to mild reduction of superficial muscle tone and possible microvascular effects. Intradermal injections of botulinum toxin have also shown cosmetic effects, including skin smoothing through reducing pore size, reducing fine lines, and a mild lifting effect from dermal tightening and reducing oil and sweat reduction. However, due to the difficulty, pain, and time-consuming nature of intradermal injections, there still remains few approved or widely practiced treatment options.

We believe our *Spongilla* technology can increase the number of intradermal uses for botulinum toxin by leveraging the unique microstructure of our *Spongilla* technology, to create microchannels into the dermis, enabling improved dermal penetration of botulinum toxins (i.e. Botox®). Using our microstructures to create microchannels into the dermis avoids the need to give multiple intradermal injections, which can be painful for patients and very time consuming for the dermatologist or esthetician. Additionally, our technology can allow for broad coverage of larger surface areas of the skin, which we believe will provide a better field effect of the botulinum toxin

We plan to leverage this platform for broad applicability across dermatologic and aesthetic skin conditions, potentially allowing dermatologists and estheticians to increase uses for the intradermal delivery of botulinum toxin. We believe this non-invasive approach could meaningfully expand the therapeutic and aesthetic utility of botulinum toxin for conditions such as axillary, palmar and plantar hyperhidrosis, acne, acne scars, rosacea, and improved skin aesthetics (including improvements in skin luminosity and brightness, reducing pore size and number of pores, reducing fine lines, and reducing skin oiliness by decreasing sebum production). Our initial clinical proof-of-concept studies using our *Spongilla* technology have demonstrated the ability to deliver botulinum toxin into the dermis for improvement in facial aesthetics and reduction in sweat production in patients with primary axillary hyperhidrosis. We plan to continue to explore additional uses for this platform and look forward to getting our technology in the hands of estheticians and dermatologists so they may better serve their patients.

We have a limited operating history. Since our inception, our operations have focused on developing XYNGARI™, DMT410, our topical botulinum toxin program, and more recently our OTC program, organizing and staffing our company, raising capital, establishing our supply chain and manufacturing processes, building an intellectual property portfolio, and conducting clinical trials. We do not have any product candidates approved for marketing and have not generated any revenue from product sales. We have funded our operations primarily through the sale of our equity securities and debt securities. Since inception, we have raised an aggregate of approximately \$77.5 million of gross proceeds from the sale of our debt and equity securities.

We have not generated any revenue to date and have incurred significant operating losses. Our net losses were \$5.7 million and \$9.1 million for the nine months ended September 30, 2025, and 2024, respectively. As of September 30, 2025, we had an accumulated deficit of \$71.4 million. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We anticipate that our expenses will increase significantly in connection with our future activities, as we:

- develop OTC kits for the treatment of acne and other skin diseases;
- prepare for commercial launch of OTC kits for the treatment of acne, including hiring additional marketing personnel;
- continue development of *Spongilla* technology and topical botulinum toxin for the treatment of aesthetic and medical skin conditions, including proof of concept clinical trials;
- manufacture our product candidates for commercial sale;
- hire additional research and development and selling, general and administrative personnel;
- maintain, expand, and protect our intellectual property portfolio; and
- incur additional costs associated with operating as a public company.

We will need additional financing to support our operations. We may seek to fund our operations through public or private equity or debt financings or other sources. Adequate additional financing may not be available to us on acceptable terms, or at all. Our failure to raise capital when needed or on favorable terms would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenues to achieve profitability, and we may never do so.

## OTC Requirements

We plan to develop and distribute OTC products, such as topical acne products, that are subject to FDA and foreign regulation. Under the U.S. OTC monograph system, OTC products that meet established conditions are generally recognized as safe and effective and do not require the submission and approval of a new drug application. The FDA OTC monographs include well-known ingredients and specify requirements for permitted indications, required warnings and precautions, allowable combinations of ingredients and dosage levels. Pharmaceutical products marketed under the OTC monograph system must conform to specific quality, formula, and labeling requirements. Following the passage of the CARES Act, FDA is updating and working to finalize current monographs.

All facilities where OTC products are manufactured, tested, packaged, stored or distributed must comply with current Good Manufacturing Practices (“cGMP”) regulations and/or regulations promulgated by competent authorities in the countries where the facilities are located. All of our pharmaceutical products are manufactured, tested, packaged, stored and distributed according to cGMP regulations. The FDA performs periodic audits to ensure that our facilities remain in compliance with all appropriate regulations. The failure of a facility to be in compliance may lead to a breach of representations made to customers or to regulatory action against us related to the products made in that facility, such as seizure, injunction or recall. Serious product quality concerns could also result in governmental actions against us that, among other things, could result in the suspension of production or distribution of our products, product seizures, loss of certain licenses or other governmental penalties, and could have a material adverse effect on our financial condition or operating results. We are required to report serious adverse events associated with the use of our OTC products marketed in the U.S. and other countries where such products are sold.

We cannot predict whether new legislation regulating our activities will be enacted or what effect any legislation would have on our business.

## OTC Pre- and Post-market Regulation

Before and after an OTC product is commercialized, numerous regulatory requirements apply, including:

- international quality system regulations, including those of the FDA and other regulatory authorities, impose cGMP requirements governing the methods used in, and the facilities and controls used for, the design, manufacture, packaging, servicing, labeling, storage, installation, and distribution of all finished OTC intended for human use;
- global standards and regulations affecting product design and development, including requirements to keep existing products current to the “state of the art,” and doing an ongoing assessment of the risk acceptability, adopting risk control measures where appropriate, and re-assessing the clinical benefit;
- labeling regulations, including a prohibition on product promotion for unapproved or “off label” uses;
- the drug reporting regulation requiring a manufacturer to report to the regulatory authorities if its drug may have caused or contributed to a death or serious injury in a way that would likely cause or contribute to a death or serious injury if it were to recur and ongoing post-market surveillance of the product and like-products to continuously evaluate the benefit/risk over the life of the product; and
- regulations on corrections and removals which require a manufacturer to report recalls and field actions to the regulatory authorities if initiated to reduce a risk to health posed by the device or to remedy a violation of the applicable laws.

## Recent Developments

On July 15, 2025, we held our annual meeting of stockholders at which time our stockholders approved the adoption of an amendment to our Amended and Restated Certificate of Incorporation, as amended, to effect a reverse stock split of its issued and outstanding shares of Common Stock, at a specific ratio, ranging from one-for-two to one-for-thirty, with the exact ratio determined by our board of directors without further approval or authorization of its stockholders. On August 1, 2025, we effected the reverse split of our shares of Common Stock at a ratio of 1-for-10, as approved by our board of directors, with no adjustment to par value. All issued and outstanding shares of Common Stock and per share amounts contained in our financial statements have been retroactively adjusted to reflect this reverse stock split for all periods presented.

On September 10, 2025, we announced a strategic pivot to shift our focus to developing and distributing OTC pharmaceutical products for the dermatology market. We plan to focus on developing and launching multiple products that can be sold directly to consumers to treat their various skin diseases and conditions. We believe this strategic shift, through leveraging the FDA's OTC monograph pathway, could accelerate our ability to launch a commercial dermatology product, reduce our regulatory burden, and give us access to a broader consumer market. We are currently working with a branding agency to develop the commercial launch strategy while also beginning the manufacturing process for our initial product launch, which we expect to occur in the middle of 2026.

On November 17, 2025, we sent notice of termination of the License Agreement, dated March 31, 2017, as amended (the "Agreement"), with Villani, Inc. ("Villani"). We terminated the Agreement without cause and the termination will become effective 90 days after the date of Villani's receipt of our notice of termination. Our decision to terminate the Agreement was made in connection with our strategic shift and the withdrawal of our XYNGARI™ IND application with the U.S. Food and Drug Administration.

#### **Corporate Information**

Our address is 3525 Del Mar Heights Rd., #322, San Diego, California 92130 and our telephone number is (858) 800-2543. Our corporate website is: [www.dermatarx.com](http://www.dermatarx.com). The content of our website shall not be deemed incorporated by reference in this prospectus and you should not consider such information as part of this prospectus.

#### **RISK FACTORS**

*Investing in our securities involves a high degree of risk. Before purchasing any of the securities you should carefully consider the risk factors incorporated by reference in this prospectus from our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, any subsequent updates described in our Quarterly Reports on Form 10-Q, and the Current Reports on Form 8-K filed since December 31, 2024, and in any accompanying prospectus supplement, as well as the risk factors set forth in our SEC reports on Forms 10-K, 10-Q and 8-K filed after the date of this prospectus and in the other documents incorporated by reference in any accompanying prospectus supplement. For a description of these reports and documents, and information about where you can find them, see "Additional Information" and "Incorporation of Certain Information By Reference." Additional risks not presently known to us or that we currently deem immaterial may also affect our business, operating results, prospects, or financial condition.*

#### **CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus and the documents incorporated by reference in this prospectus contain, and our officers and representatives may from time to time make, forward-looking statements that involve substantial risks and uncertainties. These forward-looking statements can be identified by the fact that they do not relate strictly to historical or current facts and are often characterized by the use of words such as "aim," "believe," "can," "could," "potential," "plan," "predict," "goals," "seek," "should," "may," "may have," "would," "estimate," "continue," "anticipate," "intend," "expect" or the negative of these terms, other comparable terminology or by discussions of strategy, plans or intentions. These statements speak only as of the date of this prospectus and involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These include, but are not limited to, statements about:

- our ability to continue as a going concern and our needs for additional financing;

- our ability to maintain compliance with the continued listing requirements of the Nasdaq Stock Market LLC;
- our ability to accurately estimate anticipated operating losses, expenses, future revenues, capital requirements, including our anticipated cash runway;
- the initiation, timing, progress and results of our current and future preclinical studies and clinical trials and our research and development programs;
- the success of our efforts to expand our pipeline of product candidates and develop marketable products
- our ability to develop, obtain regulatory approval for and commercialize our current and future product candidates;
- our expectations regarding collaborations and other agreements with third parties and their potential benefits;
- the timing of investigational new drug, or IND, submissions, initiation of preclinical studies and clinical trials, and timing of expected clinical results for our product candidates;
- our success in early preclinical studies, which may not be indicative of results obtained in later studies or clinical trials;
- the potential benefits of our product candidates;
- our ability to identify patients with the diseases treated by our product candidates, and to enroll healthy volunteers and patients in clinical trials;
- our ability to obtain, maintain and protect our intellectual property;
- our reliance upon intellectual property licensed from third parties, including the license to use certain components of our products and/or our product candidates;
- our ability to identify, recruit and retain key personnel;
- developments or projections relating to our competitors or our industry;
- the impact of laws and regulations;
- our expectations regarding government and third-party payor coverage and reimbursement;
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups (“JOBS”) Act;
- the impact of liquidity concerns at and failures of banks and other financial institutions, capital market instability, exchange rate fluctuations, supply chain disruptions and increases in commodity, energy and fuel prices;
- the impacts of pandemics or endemics on our operations, access to capital, research and development and clinical trials and potential disruption in the operations and business of third-party manufacturers, contract research organizations, other service providers, and collaborators with whom we conduct business;

- the impact of other global events, including political instability, natural disaster, events of terrorism and wars, including the war between Ukraine and Russia, and the corresponding tensions created from such conflict between Russia, the United States and countries in Europe as well as other countries such as China;
- the impacts of increased trade tariffs, import quotas or other trade restrictions or measures taken by the United States and other countries, including changes in U.S. trade policies that may be made by the presidential administration; and
- other risks and uncertainties, including those listed in the “Risk Factors” section of this prospectus and the documents incorporated by reference herein.

The foregoing does not represent an exhaustive list of matters that may be covered by the forward-looking statements contained herein and in the documents incorporated by reference herein or risk factors that we are faced with that may cause our actual results to differ from those anticipated in our forward-looking statements. Factors that may affect our results include, but are not limited to, the risks and uncertainties discussed in the “Risk Factors” section on page 7 of this prospectus, in our Annual Report on Form 10-K or in other reports we file with the SEC.

Moreover, new risks regularly emerge, and it is not possible for our management to predict or articulate all risks we face, nor can we assess the impact of all risks on our business or the extent to which any risk, or combination of risks, may cause actual results to differ from those contained in any forward-looking statements. The Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act, do not protect any forward-looking statements that we make in connection with this offering. All forward-looking statements included in this prospectus and in the documents incorporated by reference in this prospectus are based on information available to us on the date of this prospectus or the date of the applicable document incorporated by reference. Except to the extent required by applicable laws or rules, we undertake no obligation to publicly update or revise any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future events or otherwise. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements contained above and throughout this prospectus and in the documents incorporated by reference in this prospectus. We qualify all of our forward-looking statements by these cautionary statements.

You should rely only on the information in this prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely upon it.

#### **USE OF PROCEEDS**

Unless we inform you otherwise in the prospectus supplement, we will use the net proceeds from the sale of the securities offered by this prospectus and the exercise price from the exercise of any convertible securities, if any, for working capital and general corporate purposes.

When particular securities are offered, the prospectus supplement relating to that offering will set forth our intended use of the net proceeds received from the sale of those securities we sell. Pending the application of the net proceeds for these purposes, we expect to invest the proceeds in short-term, interest-bearing instruments or other investment-grade securities.

## THE SECURITIES WE MAY OFFER

### General

The descriptions of the securities contained in this prospectus, together with the applicable prospectus supplements, summarize all of the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we indicate in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below. We may also include in the prospectus supplement information about material United States federal income tax considerations relating to the securities, and the securities exchange, if any, on which the securities will be listed.

We may sell from time to time, in one or more offerings:

- common stock;
- preferred stock;
- warrants to purchase shares of common stock or preferred stock;
- debt securities;
- subscription rights to purchase shares of common stock, preferred stock, or debt securities; and
- units consisting of any combination of the securities listed above.

In this prospectus, we refer to the common stock, preferred stock, warrants, debt securities, subscription rights and units collectively as “securities.” The total dollar amount of all securities that we may sell pursuant to this prospectus will not exceed \$100,000,000.

If we issue debt securities at a discount from their original stated principal amount, then, for purposes of calculating the total dollar amount of all securities issued under this prospectus, we will treat the initial offering price of the debt securities as the total original principal amount of the debt securities.

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

### DESCRIPTION OF CAPITAL STOCK

*The following description of our capital stock and provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries. You should also refer to the amended and restated certificate of incorporation and the amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is part.*

### General

We have 260,000,000 shares of capital stock authorized under our amended and restated certificate of incorporation (the “Certificate of Incorporation”), consisting of 250,000,000 shares of common stock with a par value of \$0.0001 per share and 10,000,000 shares of preferred stock with a par value of \$0.0001 per share. As of November 21, 2025, we had 1,026,457 shares of common stock outstanding and no shares of preferred stock outstanding.

The additional shares of our authorized stock available for issuance may be issued at times and under circumstances so as to have a dilutive effect on earnings per share and on the equity ownership of the holders of our common stock. The ability of our board of directors to issue additional shares of stock could enhance the board’s ability to negotiate on behalf of the stockholders in a takeover situation but could also be used by the board to make a change-in-control more difficult, thereby denying stockholders the potential to sell their shares at a premium and entrenching current management.

### Common Stock

Holders of our common stock are entitled to such dividends as may be declared by our board of directors out of funds legally available for such purpose. The shares of common stock are neither redeemable nor convertible. Holders of common stock have no preemptive or subscription rights to purchase any of our securities.

Each holder of our common stock is entitled to one vote for each such share outstanding in the holder's name. No holder of common stock is entitled to cumulate votes in voting for directors.

In the event of our liquidation, dissolution or winding up, the holders of our common stock are entitled to receive pro rata our assets, which are legally available for distribution, after payments of all debts and other liabilities. All of the outstanding shares of our common stock are fully paid and non-assessable. The shares of common stock offered by this prospectus will also be fully paid and non-assessable.

### **Preferred Stock**

Our board of directors may, without further action by our stockholders, fix the rights, preferences, privileges and restrictions of up to an aggregate of 10,000,000 shares of preferred stock in one or more series and authorize their issuance. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of our common stock. The issuance of our preferred stock could adversely affect the voting power of holders of our common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control or other corporate action.

Our board of directors will fix the designations, voting powers, preferences and rights of each series, as well as the qualifications, limitations or restrictions thereof, of the preferred stock of each series that we offer under this prospectus and applicable prospectus supplements in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price per share;
- the dividend rate per share, dividend period and payment dates and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- our right, if any, to defer payment of dividends and the maximum length of any such deferral period;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock or other securities of ours, including depository shares and warrants, and, if applicable, the conversion period, the conversion price, or how it will be calculated, and under what circumstances it may be adjusted;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange period, the exchange price, or how it will be calculated, and under what circumstances it may be adjusted;

- voting rights, if any, of the preferred stock;
- preemption rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material or special U.S. federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuances of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock being issued as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, rights, preferences, privileges, qualifications or restrictions of the preferred stock.

## **IPO Warrants**

We currently have outstanding Warrants issued in connection with our initial public offering (the “IPO”). The Warrants entitle the registered holders to purchase common stock at a price equal to \$1,680.00 per share, subject to adjustment as discussed below, immediately following the issuance of such Warrants and terminating at 5:00 p.m., New York City time, five years after the closing of our IPO, or August 17, 2026.

The exercise price and number of shares of common stock issuable upon exercise of the Warrants may be adjusted in certain circumstances, including in the event of a stock dividend or recapitalization, reorganization, merger or consolidation. However, the Warrants will not be adjusted for issuances of shares of common stock at prices below its exercise price.

**Exercisability.** The Warrants are exercisable immediately upon issuance and at any time up to the date that is five years from the date of issuance. The Warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of common stock purchased upon such exercise. Each Warrant entitles the holder thereof to purchase one share of common stock. Warrants are not exercisable for a fraction of a share and may only be exercised into whole numbers of shares. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price and rounded down to the nearest whole share. Unless otherwise specified in the Warrant, the holder will not have the right to exercise the Warrants, in whole or in part, if the holder (together with its affiliates) would beneficially own in excess of 4.99% (or 9.99% at the holder’s election) of the number of our shares of common stock outstanding immediately after giving effect to the exercise, as such percentage is determined in accordance with the terms of the Warrant. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99% upon at least 61 days prior notice from the holder to us.

**Exercise Price.** The exercise price per share of common stock purchasable upon exercise of the Warrants is \$16, 800.00 per share, and is subject to adjustments for stock splits, reclassifications, subdivisions, and other similar transactions. In addition to the exercise price per share of common stock, and other applicable charges and taxes are due and payable upon exercise.

**Warrant Agent; Global Certificate.** The Warrants are issued in registered form under a warrant agency agreement between a warrant agent and us. The Warrants will initially be represented only by one or more global warrants deposited with the warrant agent, as custodian on behalf of The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

**Transferability.** Subject to applicable laws, the Warrants may be transferred at the option of the holders upon surrender of the Warrants to the warrant agent, together with the appropriate instruments of transfer.

**Exchange Listing.** The Warrants are listed on the Nasdaq under the symbol “DRMAW.” There is no established public trading market for the Warrants, and we do not expect a market to develop. Without an active trading market, the liquidity of Warrants will be limited.

**Adjustments; Fundamental Transaction.** The exercise price and the number of shares underlying the Warrants are subject to appropriate adjustment in the event of stock splits, stock dividends on our common shares, stock combinations or similar events affecting our common shares. In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our common shares are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding common shares (each, a Fundamental Transaction), then following such Fundamental Transaction the holders of the Warrants will be entitled to receive upon exercise of the Warrants the same kind and amount of securities, cash or property which the holders would have received had they exercised the Warrants immediately prior to such Fundamental Transaction. Any successor to us or surviving entity will assume the obligations under the warrants. Additionally, as more fully described in the Warrant, in the event of certain Fundamental Transactions, the holders of the Warrants will be entitled to receive consideration in an amount equal to the Black Scholes value of the Warrants on the date of consummation of such transaction.

**Rights as a Shareholder.** Except by virtue of such holder’s ownership of our common stock, the holder of a Warrant does not have rights or privileges of a shareholder, including any voting rights, until the holder exercises such Warrant.

### **Stock Options**

As of September 30, 2025, we had reserved the following shares of common stock for issuance pursuant to stock options under the 2021 Plan described below:

- 20,477 shares of our common stock reserved for issuance under stock option agreements issued pursuant to the 2021 Plan with a weighted-average exercise price of \$25.27 per share;
- 13 shares of our common stock remain reserved for future issuance under the 2021 Plan.

### **Anti-Takeover Provisions**

#### ***Section 203 of the Delaware General Corporation Law***

We are subject to Section 203 of the DGCL, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.
- In general, Section 203 defines a “business combination” to include the following:
  - any merger or consolidation involving the corporation and the interested stockholder;
  - any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
  - subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
  - any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
  - the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an “interested stockholder” as an entity or person who, together with the entity or person’s affiliates and associates, beneficially owns, or is an affiliate or associate of the corporation and within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

***Anti-Takeover Effects of Certain Provisions of our Certificate of Incorporation and Amended Bylaws***

Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the voting power of our shares of common stock outstanding will be able to elect all of our directors. The directors may be removed by the stockholders only for cause upon the vote of holders of 66-2/3% of the shares then entitled to vote at an election of directors. Furthermore, the authorized number of directors may be changed only by resolution of our board of directors, and vacancies and newly created directorships on our board of directors may, except as otherwise required by law or determined by our board, only be filled by a majority vote of the directors then serving on the board, even though less than a quorum. Our Certificate of Incorporation and amended and restated bylaws (the “Amended Bylaws”) provide that all stockholder actions must be effected at a duly called meeting of stockholders and not by a consent in writing. A special meeting of stockholders may be called at any time only by or at the direction of the board of directors or the chairman of the board of directors. Our Amended Bylaws also provide that stockholders seeking to present proposals before a meeting of stockholders to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and will specify requirements as to the form and content of a stockholder’s notice.

Our Certificate of Incorporation further provides that the affirmative vote of the holders of at least 66 2/3% of the votes which all our stockholders would be entitled to cast in any election of directors will be required to amend certain provisions of our Certificate of Incorporation, including provisions relating to the size of the board, removal of directors, special meetings of stockholders, actions by written consent and cumulative voting. The affirmative vote of holders of at least 66 2/3% of the voting power of all of the then outstanding shares of voting stock, voting as a single class, is required to amend or repeal our Amended Bylaws, although our Amended Bylaws may be amended by a simple majority vote of our whole board of directors.

The foregoing provisions will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of the Company by replacing our board of directors.

Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change the control of our company.

These provisions are also designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy rights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of deterring hostile takeovers or delaying changes in control of the Company or our management. As a consequence, these provisions also may inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts.

#### ***Choice of Forum***

Our Certificate of Incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for: (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees or stockholders to us or our stockholders; (3) any action asserting a claim against us, any director or our officers and employees arising pursuant to any provision of the DGCL, our Certificate of Incorporation or our Amended Bylaws, or as to which the DGCL confers exclusive jurisdiction on the Court of Chancery; or (4) any action asserting a claim against us, any director or our officers or employees that is governed by the internal affairs doctrine; provided that the exclusive forum provisions will not apply to suits brought to enforce any liability or duty created by the Exchange Act, or to any claim for which the federal courts have exclusive jurisdiction.

Our Certification of Incorporation further provides that, unless we consent in writing to the selections of an alternative forum, the federal district courts are the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act, subject to a final adjudication in the State of Delaware of the enforceability of such exclusive forum provision. We note that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Although we believe the provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

#### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is Odyssey Transfer and Trust Company. The transfer agent address is 2155 Woodlane Drive, Suite 100, Woodbury, MN 55125, email: [clientsus@odysseytrust.com](mailto:clientsus@odysseytrust.com). The transfer agent for any series of preferred stock that we may offer under this prospectus will be named and described in the prospectus supplement for that series.

#### **National Securities Exchange Listing**

Our common stock and Warrants are listed on Nasdaq under the symbols “DRMA” and “DRMAW,” respectively.

#### **DESCRIPTION OF WARRANTS**

We summarize below some of the provisions that will apply to the warrants unless the applicable prospectus supplement provides otherwise. This summary may not contain all information that is important to you. The complete terms of the warrants will be contained in the applicable warrant certificate and warrant agreement. These documents have been or will be included or incorporated by reference as exhibits to the registration statement of which this prospectus is a part. You should read the warrant certificate and the warrant agreement. You should also read the prospectus supplement, which will contain additional information and which may update or change some of the information below.

## General

We may issue warrants to purchase our debt or equity securities or securities of third parties or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing. Warrants may be issued independently or together with any other securities and may be attached to, or separate from, such securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank, trust company or other financial institution, as warrant agent, or we may issue warrants directly to investors. A description of the terms and material provisions of any warrants we may issue will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement will describe the following terms of any warrants in respect of which this prospectus is being delivered:

- the title of such warrants;
- the aggregate number of such warrants;
- the price or prices at which such warrants will be issued;
- the currency or currencies in which the price of such warrants will be payable;
- the securities or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing, purchasable upon exercise of such warrants;
- the price at which and the currency or currencies in which the securities or other rights purchasable upon exercise of such warrants may be purchased;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- provision for changes to or adjustments in the exercise price of such warrants, if any;
- if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;
- if applicable, the date on and after which such warrants and the related securities will be separately transferable;
- information with respect to book-entry procedures, if any;
- if applicable, a discussion of any material United States Federal income tax or foreign income tax considerations; and
- any other terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

## Transfer Agent and Registrar

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

## DESCRIPTION OF DEBT SECURITIES

This prospectus describes certain general terms and provisions of debt securities that we may offer. The debt securities may be issued pursuant to, in the case of senior debt securities, a senior indenture, and in the case of subordinated debt securities, a subordinated indenture, in each case in the forms filed as exhibits to this registration statement, which we refer to as the “indentures.” The indentures will be entered into between us and a trustee to be named prior to the issuance of any debt securities, which we refer to as the “trustee.” The indentures will not limit the amount of debt securities that can be issued thereunder and will provide that the debt securities may be issued from time to time in one or more series pursuant to the terms of one or more securities resolutions or supplemental indentures creating such series.

We have summarized below the material provisions of the indentures and the debt securities or indicated which material provisions will be described in the related prospectus supplement for any offering of debt securities. These descriptions are only summaries, and you should refer to the relevant indenture for the particular offering of debt securities itself which will describe completely the terms and definitions of the offered debt securities and contain additional information about the debt securities.

### Terms

When we offer to sell a particular series of debt securities, we will describe the specific terms of the securities in a prospectus supplement. The prospectus supplement will set forth the following terms, as applicable, of the debt securities offered thereby:

- the designation, aggregate principal amount, currency or composite currency and denominations;
- the price at which such debt securities will be issued and, if an index formula or other method is used, the method for determining amounts of principal or interest;
- the maturity date and other dates, if any, on which principal will be payable;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;
- the interest rate (which may be fixed or variable), if any;
- the date or dates from which interest will accrue and on which interest will be payable, and the record dates for the payment of interest;
- the manner of paying principal and interest;
- the place or places where principal and interest will be payable;
- the terms of any mandatory or optional redemption by us or any third party including any sinking fund;
- the terms of any conversion or exchange;
- the terms of any redemption at the option of holders or put by the holders;

- any tax indemnity provisions;
- if the debt securities provide that payments of principal or interest may be made in a currency other than that in which the debt securities are denominated, the manner for determining such payments;
- the portion of principal payable upon acceleration of a Discounted Debt Security (as defined below);
- whether and upon what terms debt securities may be defeased;
- any events of default or covenants in addition to or in lieu of those set forth in the indentures;
- provisions for electronic issuance of debt securities or for the issuance of debt securities in uncertificated form; and
- any additional provisions or other special terms not inconsistent with the provisions of the indentures, including any terms that may be required or advisable under United States or other applicable laws or regulations, or advisable in connection with the marketing of the debt securities.

Debt securities of any series may be issued as registered debt securities or uncertificated debt securities, in such denominations as specified in the terms of the series.

Securities may be issued under the indentures as Discounted Debt Securities to be offered and sold at a substantial discount from the principal amount thereof. Special United States federal income tax and other considerations applicable thereto will be described in the prospectus supplement relating to such Discounted Debt Securities. “Discounted Debt Security” means a security where the amount of principal due upon acceleration is less than the stated principal amount.

We are not obligated to issue all debt securities of one series at the same time and, unless otherwise provided in the prospectus supplement, we may reopen a series, without the consent of the holders of the debt securities of that series, for the issuance of additional debt securities of that series. Additional debt securities of a particular series will have the same terms and conditions as outstanding debt securities of such series, except for the date of original issuance and the offering price, and will be consolidated with, and form a single series with, such outstanding debt securities.

### **Ranking**

The senior debt securities will rank equally with all of our other senior and unsubordinated debt. Our secured debt, if any, will be effectively senior to the senior debt securities to the extent of the value of the assets securing such debt. The subordinated debt securities will be subordinate and junior in right of payment to all of our present and future senior indebtedness to the extent and in the manner described in the prospectus supplement and as set forth in the board resolution, officer’s certificate or supplemental indenture relating to such offering.

We have only a stockholder’s claim on the assets of our subsidiaries. This stockholder’s claim is junior to the claims that creditors of our subsidiaries have against our subsidiaries. Holders of our debt securities will be our creditors and not creditors of any of our subsidiaries. As a result, all the existing and future liabilities of our subsidiaries, including any claims of their creditors, will effectively be senior to the debt securities with respect to the assets of our subsidiaries. In addition, to the extent that we issue any secured debt, the debt securities will be effectively subordinated to such secured debt to the extent of the value of the assets securing such secured debt.

The debt securities will be obligations exclusively of Dermata Therapeutics, Inc. To the extent that our ability to service our debt, including the debt securities, may be dependent upon the earnings of our future subsidiaries, if any, our ability to do so will be dependent on the ability of our subsidiaries to distribute those earnings to us as dividends, loans or other payments.

## Certain Covenants

Any covenants that may apply to a particular series of debt securities will be described in the prospectus supplement relating thereto.

## Successor Obligor

The indentures provide that, unless otherwise specified in the securities resolution or supplemental indenture establishing a series of debt securities, we shall not consolidate with or merge into, or transfer all or substantially all of our assets to, any person in any transaction in which we are not the survivor, unless:

- the person is organized under the laws of the United States or a jurisdiction within the United States;
- the person assumes by supplemental indenture all of our obligations under the relevant indenture, the debt securities and any coupons;
- immediately after the transaction no Default (as defined below) exists; and
- we deliver to the trustee an officers' certificate and opinion of counsel stating that the transaction complies with the foregoing requirements and that all conditions precedent provided for in the indenture relating to the transaction have been complied with.

In such event, the successor will be substituted for us, and thereafter all of our obligations under the relevant indenture, the debt securities and any coupons will terminate.

The indentures provide that these limitations shall not apply if our board of directors makes a good faith determination that the principal purpose of the transaction is to change our state of incorporation.

## Exchange of Debt Securities

Registered debt securities may be exchanged for an equal aggregate principal amount of registered debt securities of the same series and date of maturity in such authorized denominations as may be requested upon surrender of the registered debt securities at an agency of the Company maintained for such purpose and upon fulfillment of all other requirements of such agent.

## Default and Remedies

Unless the securities resolution or supplemental indenture establishing the series otherwise provides (in which event the prospectus supplement will so state), an "Event of Default" with respect to a series of debt securities will occur if:

1. we default in any payment of interest on any debt securities of such series when the same becomes due and payable and the default continues for a period of 30 days;
2. we default in the payment of all or any part of the principal and premium, if any, of any debt securities of such series when the same becomes due and payable at maturity or upon redemption, acceleration or otherwise and such default shall continue for five or more days;
3. we default in the performance of any of our other agreements applicable to the series and the default continues for 30 days after the notice specified below;
4. a court of competent jurisdiction enters an order or decree under any Bankruptcy Law (as defined below) that:
  - (A) is for relief against us in an involuntary case,
  - (B) appoints a Custodian (as defined below) for us or for any substantial part of our property, or
  - (C) orders the winding up or liquidation of us, and the order or decree remains unstayed and in effect for 90 consecutive days;

5. we, pursuant to or within the meaning of any Bankruptcy Law:

- (A) commence a voluntary case,
- (B) consent to the entry of an order for relief against us in an involuntary case,
- (C) consent to the appointment of a Custodian for us or for any substantial part of our property, or
- (D) make a general assignment for the benefit of our creditors; or

6. there occurs any other Event of Default provided for in such series.

The term “Bankruptcy Law” means Title 11 of the United States Code or any similar Federal or State law for the relief of debtors. The term “Custodian” means any receiver, trustee, assignee, liquidator or a similar official under any Bankruptcy Law.

“Default” means any event which is, or after notice or passage of time would be, an Event of Default. A Default under subparagraph (3) above is not an Event of Default until the trustee or the holders of at least 25% in principal amount of the series notify us of the Default and we do not cure the Default within the time specified after receipt of the notice.

The trustee may require indemnity satisfactory to it before it enforces the indentures or the debt securities of the series. Subject to certain limitations, holders of a majority in principal amount of the debt securities of the series may direct the trustee in its exercise of any trust or power with respect to such series. Except in the case of Default in payment on a series, the trustee may withhold from securityholders of such series notice of any continuing Default if the trustee determines that withholding notice is in the interest of such securityholders. We are required to furnish the trustee annually a brief certificate as to our compliance with all conditions and covenants under the indentures.

The indentures do not have cross-default provisions. Thus, a default by us on any other debt, including any other series of debt securities, would not constitute an Event of Default.

#### **Amendments and Waivers**

The indentures and the debt securities or any coupons of the series may be amended, and any Default may be waived as follows:

Unless the securities resolution or supplemental indenture otherwise provides (in which event the applicable prospectus supplement will so state), the debt securities and the indentures may be amended with the consent of the holders of a majority in principal amount of the debt securities of all series affected voting as one class. Unless the securities resolution or supplemental indenture otherwise provides (in which event the applicable prospectus supplement will so state), a Default other than a Default in payment on a particular series may be waived with the consent of the holders of a majority in principal amount of the debt securities of the series. However, without the consent of each securityholder affected, no amendment or waiver may:

- change the fixed maturity of or the time for payment of interest on any debt security;
- reduce the principal, premium or interest payable with respect to any debt security;
- change the place of payment of a debt security or the currency in which the principal or interest on a debt security is payable;

- change the provisions for calculating any redemption or repurchase price with respect to any debt security;
- adversely affect any holder's right to receive payment of principal and interest or to institute suit for the enforcement of any such payment;
- reduce the amount of debt securities whose holders must consent to an amendment or waiver;
- make any change that materially adversely affects the right to convert any debt security;
- waive any Default in payment of principal of or interest on a debt security; or
- adversely affect any holder's rights with respect to redemption or repurchase of a debt security.

Without the consent of any securityholder, the indentures or the debt securities may be amended to:

- provide for assumption of our obligations to securityholders in the event of a merger or consolidation requiring such assumption;
- cure any ambiguity, omission, defect or inconsistency;
- conform the terms of the debt securities to the description thereof in the prospectus and prospectus supplement offering such debt securities;
- create a series and establish its terms;
- provide for the acceptance of appointment by a successor trustee or to facilitate the administration of the trusts by more than one trustee;
- provide for uncertificated or unregistered securities;
- make any change that does not adversely affect the rights of any securityholder;
- add to our covenants; or
- make any other change to the indentures so long as no debt securities are outstanding.

#### **Conversion Rights**

Any securities resolution or supplemental indenture establishing a series of debt securities may provide that the debt securities of such series will be convertible at the option of the holders thereof into or for our common stock or other equity or debt instruments. The securities resolution or supplemental indenture may establish, among other things, (1) the number or amount of shares of common stock or other equity or debt instruments for which \$1,000 aggregate principal amount of the debt securities of the series is convertible, as may be adjusted pursuant to the terms of the relevant indenture and the securities resolution; and (2) provisions for adjustments to the conversion rate and limitations upon exercise of the conversion right. The indentures provide that we will not be required to make an adjustment in the conversion rate unless the adjustment would require a cumulative change of at least 1% in the conversion rate. However, we will carry forward any adjustments that are less than 1% of the conversion rate and take them into account in any subsequent adjustment of the conversion rate.

## Legal Defeasance and Covenant Defeasance

Debt securities of a series may be defeased in accordance with their terms and, unless the securities resolution or supplemental indenture establishing the terms of the series otherwise provides, as set forth below. We at any time may terminate as to a series all of our obligations (except for certain obligations, including obligations with respect to the defeasance trust and obligations to register the transfer or exchange of a debt security, to replace destroyed, lost or stolen debt securities and coupons and to maintain paying agencies in respect of the debt securities) with respect to the debt securities of the series and any related coupons and the relevant indenture, which we refer to as legal defeasance. We at any time may terminate as to a series our obligations with respect to any restrictive covenants which may be applicable to a particular series, which we refer to as covenant defeasance.

We may exercise our legal defeasance option notwithstanding our prior exercise of our covenant defeasance option. If we exercise our legal defeasance option, a series may not be accelerated because of an Event of Default. If we exercise our covenant defeasance option, a series may not be accelerated by reference to any covenant which may be applicable to a series.

To exercise either defeasance option as to a series, we must (1) irrevocably deposit in trust with the trustee (or another trustee) money or U.S. Government Obligations (as defined below), deliver a certificate from a nationally recognized firm of independent accountants expressing their opinion that the payments of principal and interest when due on the deposited U.S. Government Obligations, without reinvestment, plus any deposited money without investment will provide cash at such times and in such amounts as will be sufficient to pay the principal and interest when due on all debt securities of such series to maturity or redemption, as the case may be; and (2) comply with certain other conditions. In particular, we must obtain an opinion of tax counsel that the defeasance will not result in recognition of any gain or loss to holders for federal income tax purposes.

“U.S. Government Obligations” means direct obligations of the United States or any agency or instrumentality of the United States, the payment of which is unconditionally guaranteed by the United States, which, in either case, have the full faith and credit of the United States pledged for payment and which are not callable at the issuer’s option, or certificates representing an ownership interest in such obligations.

## Regarding the Trustee

Unless otherwise indicated in a prospectus supplement, the trustee will also act as depository of funds, transfer agent, paying agent and conversion agent, as applicable, with respect to the debt securities. In certain circumstances, we or the securityholders may remove the trustee as the trustee under a given indenture. The indenture trustee may also provide additional unrelated services to us as a depository of funds, registrar, trustee and similar services.

## Governing Law

The indentures and the debt securities will be governed by New York law, except to the extent that the Trust Indenture Act of 1939 is applicable.

## DESCRIPTION OF SUBSCRIPTION RIGHTS

We may issue subscription rights to purchase our equity or debt securities. These subscription rights may be offered independently or together with any other security offered hereby and may or may not be transferable by the stockholder receiving the subscription rights in such offering. In connection with any offering of subscription 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 subscription rights we offer, if any, will, to the extent applicable, include specific terms relating to the offering, including some or all of the following:

- the price, if any, for the subscription rights;
- the exercise price payable for our equity or debt securities upon the exercise of the subscription rights;

- the number of subscription rights to be issued to each stockholder;
- the number and terms of our equity and debt securities which may be purchased per each subscription right;
- the extent to which the subscription rights are transferable;
- any other terms of the subscription rights, including the terms, procedures and limitations relating to the exchange and exercise of the subscription rights;
- the date on which the right to exercise the subscription rights shall commence, and the date on which the subscription rights shall expire;
- the extent to which the subscription rights may include an over-subscription privilege with respect to unsubscribed securities or an over-allotment privilege to the extent the securities are fully subscribed; and
- if applicable, the material terms of any standby underwriting or purchase arrangement which may be entered into by us in connection with the offering of subscription rights.

#### **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 (but, to the extent convertible securities are included in the units, the holder of the units will be deemed the holder of the convertible securities and not the holder of the underlying securities). The unit agreement under which a unit is issued, if any, 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;
- the terms of the unit agreement governing the units;
- United States federal income tax considerations relevant to the units; and
- whether the units will be issued in fully registered global form.

This summary of certain general terms of units and any summary description of units in the applicable prospectus supplement do not purport to be complete and are qualified in their entirety by reference to all provisions of the applicable unit agreement and, if applicable, collateral arrangements and depositary arrangements relating to such units. The forms of the unit agreements and other documents relating to a particular issue of units will be filed with the SEC each time we issue units, and you should read those documents for provisions that may be important to you.

## FORMS OF SECURITIES

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

### Global Securities

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

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

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

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

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

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

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

## PLAN OF DISTRIBUTION

### Initial Offering and Sale of Securities

Unless otherwise set forth in a prospectus supplement accompanying this prospectus, we may sell the securities being offered hereby, from time to time, by one or more of the following methods:

- to or through underwriting syndicates represented by managing underwriters;
- through one or more underwriters without a syndicate for them to offer and sell to the public;
- through dealers or agents; and
- to investors directly in negotiated sales or in competitively bid transactions.

Offerings of securities covered by this prospectus also may be made into an existing trading market for those securities in transactions at other than a fixed price, either:

- on or through the facilities of Nasdaq or any other securities exchange or quotation or trading service on which those securities may be listed, quoted, or traded at the time of sale; and/or
- to or through a market maker other than on the securities exchanges or quotation or trading services set forth above.

Those at-the-market offerings, if any, will be conducted by underwriters acting as principal or agent of the Company, who may also be third-party sellers of securities as described above. The prospectus supplement with respect to the offered securities will set forth the terms of the offering of the offered securities, including:

- the name or names of any underwriters, dealers or agents;
- the purchase price of the offered securities and the proceeds to us from such sale;

- any underwriting discounts and commissions or agency fees and other items constituting underwriters' or agents' compensation;
- any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers;
- any securities exchange on which such offered securities may be listed; and
- any underwriter, agent or dealer involved in the offer and sale of any series of the securities.

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

- at fixed prices, which may be changed;
- at market prices prevailing at the time of the sale;
- at varying prices determined at the time of sale; or
- at negotiated prices.

Each prospectus supplement will set forth the manner and terms of an offering of securities including:

- whether that offering is being made to underwriters, through agents or directly to the public;
- the rules and procedures for any auction or bidding process, if used;
- the securities' purchase price or initial public offering price; and
- the proceeds we anticipate from the sale of the securities, if any.

In addition, we may enter into derivative or hedging transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. The applicable prospectus supplement may indicate, in connection with such a transaction, that the third parties may sell securities covered by and pursuant to this prospectus and an applicable prospectus supplement. If so, the third party may use securities pledged by us or borrowed from us or others to settle such sales and may use securities received from us to close out any related short positions. We may also loan or pledge securities covered by this prospectus and an applicable prospectus supplement to third parties, who may sell the loaned securities or, in an event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus and the applicable prospectus supplement.

#### **Sales Through Underwriters**

If underwriters are used in the sale of some or all of the securities covered by this prospectus, the underwriters will acquire the securities for their own account. The underwriters may resell the securities, either directly to the public or to securities dealers, at various times in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to certain conditions. Unless indicated otherwise in a prospectus supplement, the underwriters will be obligated to purchase all the securities of the series offered if any of the securities are purchased.

Any public offering price and any concessions allowed or reallocated to dealers may be changed intermittently.

#### **Sales Through Agents**

Unless otherwise indicated in the applicable prospectus supplement, when securities are sold through an agent, the designated agent will agree, for the period of its appointment as agent, to use specified efforts to sell the securities for our account and will receive commissions from us as will be set forth in the applicable prospectus supplement.

Securities bought in accordance with a redemption or repayment under their terms also may be offered and sold, if so indicated in the applicable prospectus supplement, in connection with a remarketing by one or more firms acting as principals for their own accounts or as agents for us. Any remarketing firm will be identified and the terms of its agreement, if any, with us and its compensation will be described in the prospectus supplement. Remarketing firms may be deemed to be underwriters in connection with the securities remarketed by them.

If so indicated in the applicable prospectus supplement, we may authorize agents, underwriters or dealers to solicit offers by certain specified institutions to purchase securities at a price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a future date specified in the prospectus supplement. These contracts will be subject only to those conditions set forth in the applicable prospectus supplement, and the prospectus supplement will set forth the commissions payable for solicitation of these contracts.

#### **Direct Sales**

We may also sell offered securities directly to institutional investors or others. In this case, no underwriters or agents would be involved. The terms of such sales will be described in the applicable prospectus supplement.

#### **General Information**

Broker-dealers, agents or underwriters may receive compensation in the form of discounts, concessions or commissions from us and/or the purchasers of securities for whom such broker-dealers, agents or underwriters may act as agents or to whom they sell as principal, or both. This compensation to a particular broker-dealer might be in excess of customary commissions.

Underwriters, dealers and agents that participate in any distribution of the offered securities may be deemed “underwriters” within the meaning of the Securities Act, so any discounts or commissions they receive in connection with the distribution may be deemed to be underwriting compensation. Those underwriters and agents may be entitled, under their agreements with us, to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution by us to payments that they may be required to make in respect of those civil liabilities. Certain of those underwriters or agents may be customers of, engage in transactions with, or perform services for, us or our affiliates in the ordinary course of business. We will identify any underwriters or agents, and describe their compensation, in a prospectus supplement. Any institutional investors or others that purchase offered securities directly, and then resell the securities, may be deemed to be underwriters, and any discounts or commissions received by them from us and any profit on the resale of the securities by them may be deemed to be underwriting discounts and commissions under the Securities Act.

We will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, if we enter into any material arrangement with a broker, dealer, agent or underwriter for the sale of securities through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer. Such prospectus supplement will disclose:

- the name of any participating broker, dealer, agent or underwriter;
- the number and type of securities involved;
- the price at which such securities were sold;
- any securities exchanges on which such securities may be listed;
- the commissions paid or discounts or concessions allowed to any such broker, dealer, agent or underwriter, where applicable; and
- other facts material to the transaction.

In order to facilitate the offering of certain securities under this prospectus or an applicable prospectus supplement, certain persons participating in the offering of those securities may engage in transactions that stabilize, maintain or otherwise affect the price of those securities during and after the offering of those securities. Specifically, if the applicable prospectus supplement permits, the underwriters of those securities may over-allot or otherwise create a short position in those securities for their own account by selling more of those securities than have been sold to them by us and may elect to cover any such short position by purchasing those securities in the open market.

In addition, the underwriters may stabilize or maintain the price of those securities by bidding for or purchasing those securities in the open market and may impose penalty bids, under which selling concessions allowed to syndicate members or other broker-dealers participating in the offering are reclaimed if securities previously distributed in the offering are repurchased in connection with stabilization transactions or otherwise. 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. The imposition of a penalty bid may also affect the price of securities to the extent that it discourages resales of the securities. No representation is made as to the magnitude or effect of any such stabilization or other transactions. Such transactions, if commenced, may be discontinued at any time.

In order to comply with the securities laws of certain states, if applicable, the securities must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

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

This prospectus, any applicable prospectus supplement and any applicable pricing supplement in electronic format may be made available on the Internet sites of, or through other online services maintained by, us and/or one or more of the agents and/or dealers participating in an offering of securities, or by their affiliates. In those cases, prospective investors may be able to view offering terms online and, depending upon the particular agent or dealer, prospective investors may be allowed to place orders online.

Other than this prospectus, any applicable prospectus supplement and any applicable pricing supplement in electronic format, the information on our website or the website of any agent or dealer, and any information contained in any other website maintained by any agent or dealer:

- is not part of this prospectus, any applicable prospectus supplement or any applicable pricing supplement or the registration statement of which they form a part;
- has not been approved or endorsed by us or by any agent or dealer in its capacity as an agent or dealer, except, in each case, with respect to the respective website maintained by such entity; and
- should not be relied upon by investors.

There can be no assurance that we will sell all or any of the securities offered by this prospectus.

This prospectus may also be used in connection with any issuance of common stock or preferred stock upon exercise of a warrant if such issuance is not exempt from the registration requirements of the Securities Act.

In addition, we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing securityholders. In some cases, we or dealers acting with us or on our behalf may also purchase securities and reoffer them to the public by one or more of the methods described above. This prospectus may be used in connection with any offering of our securities through any of these methods or other methods described in the applicable prospectus supplement.

#### **LEGAL MATTERS**

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered hereby will be passed upon for us by Lowenstein Sandler LLP, New York, New York. If the validity of the securities offered hereby in connection with offerings made pursuant to this prospectus are passed upon by counsel for the underwriters, dealers or agents, if any, such counsel will be named in the prospectus supplement relating to such offering.

#### **EXPERTS**

The financial statements of Dermata Therapeutics, Inc. (the “Company”) as of December 31, 2024 and 2023 and for the years then ended incorporated in this prospectus by reference from the Annual Report on Form 10-K of the Company for the year ended December 31, 2024, have been audited by Baker Tilly US, LLP, an independent registered public accounting firm, as stated in their report (which report expresses an unqualified opinion and includes an explanatory paragraph relating to a going concern uncertainty), which is incorporated herein by reference. Such financial statements are incorporated by reference in reliance upon the report of such firm given their authority as experts in accounting and auditing.

#### **ADDITIONAL INFORMATION**

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered by this prospectus. Pursuant to SEC rules, this prospectus, which is part of the registration statement, omits certain information, exhibits, schedules and undertakings set forth in the registration statement. For further information pertaining to us and our securities, reference is made to our SEC filings and to the registration statement and the exhibits and schedules to the registration statement of which this prospectus forms a part. Statements contained in this prospectus as to the contents or provisions of any documents referred to in this prospectus are not necessarily complete, and in each instance where a copy of the document has been filed as an exhibit to the registration statement, reference is made to the exhibit for a more complete description of the matters involved.

In addition, registration statements and certain other filings made with the SEC electronically are publicly available through the SEC’s web site at <http://www.sec.gov>. The registration statement, including all exhibits and amendments to the registration statement, has been filed electronically with the SEC.

We are subject to the information and periodic reporting requirements of the Exchange Act and, in accordance with such requirements, will file periodic reports, proxy statements, and other information with the SEC. These periodic reports, proxy statements, and other information will be available for inspection and copying at the web site of the SEC referred to above. We also maintain a website at [www.gaintherapeutics.com](http://www.gaintherapeutics.com), at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

You should rely only on the information in this prospectus and the additional information described above and under the heading “Incorporation of Certain Information by Reference” below. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely upon it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus was accurate on the date of the front cover of this prospectus only. Our business, financial condition, results of operations and prospects may have changed since that date.

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

#### INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information that we file with it into this prospectus, 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. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus and any accompanying prospectus supplement.

We incorporate by reference the documents listed below that we have previously filed with the SEC:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2024, as filed with the SEC on March 17, 2025;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2025, June 30, 2025, and September 30, 2025, as filed with the SEC on [May 14, 2025](#), [August 13, 2025](#), and [November 14, 2025](#), respectively;
- our Current Reports on Form 8-K as filed with the SEC on [January 21, 2025](#), [January 23, 2025](#), [March 25, 2025](#), [March 27, 2025](#), [March 28, 2025](#), [April 15, 2025](#), [May 16, 2025](#), [June 5, 2025](#), [July 7, 2025](#), [July 16, 2025](#), [July 30, 2025](#), [August 25, 2025](#), [September 10, 2025](#), [September 17, 2025](#), [November 7, 2025](#), [November 14, 2025](#), and [November 18, 2025](#) (other than any portions thereof deemed furnished and not filed); and
- the description of our common stock and Warrants contained in our Annual Report on [Form 10-K](#) filed with the SEC on March 17, 2025, including any amendments and reports filed for the purpose of updating such description.

All reports and other documents that we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial filing of the registration statement and prior to effectiveness of the registration statement, and after the date of this prospectus but prior to the termination or completion of the offering of the securities hereunder will also be considered to be incorporated by reference into this prospectus from the date of the filing of these reports and documents, and will supersede the information herein; provided, however, that all reports, exhibits and other information that we “furnish” to the SEC will not be considered incorporated by reference into this prospectus. Any statement contained in a document incorporated by reference in this prospectus or any prospectus supplement shall be deemed to be modified or superseded to the extent that a statement contained herein, therein or in any other subsequently filed document that also is incorporated by reference herein or therein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus or any prospectus supplement.

We will provide you without charge, upon your oral or written request, with a copy of any or all reports, proxy statements and other documents we file with the SEC, as well as any or all of the documents incorporated by reference in this prospectus or the registration statement (other than exhibits to such documents unless such exhibits are specifically incorporated by reference into such documents). Requests for such copies should be directed to Dermata Therapeutics, Inc., Attn: President and Chief Executive Officer, 3525 Del Mar Heights, Rd., #322, San Diego, California 92130. You may also direct any requests for documents to us by telephone at (858) 800-2543.

**\$100,000,000**

**Common Stock  
Preferred Stock  
Warrants  
Debt Securities  
Subscription Rights  
Units**

**PROSPECTUS**

**, 2025**

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**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

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

The following table sets forth the costs and expenses payable by Dermata in connection with the sale and distribution of the securities being registered. All amounts are estimates except the SEC registration fee and FINRA fee.

SEC Registration Fee	\$	483(1)
Legal Fees and Expenses		*
Accounting Fees and Expenses		*
Printing and Engraving		*
Miscellaneous		*
<b>Total:</b>	\$	*

\* These fees and expenses depend on the securities offered and the number of issuances and accordingly cannot be estimated at this time.

(1) This amount excludes a registration fee amount of \$10,635 associated with \$96,507,888 of securities previously registered on the Registration Statement on Form S-3 (File No. 333-268383) and which remain unsold. Pursuant to Rule 415(a)(6) under the Securities Act, the amount of such registration fee associated with the offering of the unsold securities will be carried forward to be applied to the unsold securities registered under this registration statement and no additional filing fee will be due with respect to the unsold securities in connection with the filing of this registration statement.

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

Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for unlawful payment of dividends or unlawful stock purchases or redemptions, or (iv) for any transaction from which the director derived an improper personal benefit. Our Certificate of Incorporation contains such a provision.

Section 145 of the DGCL provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys' fees), judgments, fines, and amounts paid in settlement in connection with specified actions, suits, or proceedings, whether civil, criminal, administrative, or investigative (other than an action by or in the right of the corporation - a "derivative action"), if they acted in good faith and in a manner they 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 their conduct was unlawful. A similar standard is applicable in the case of derivative actions, except that indemnification only extends to expenses (including attorneys' fees) incurred in connection with defense or settlement of such action, and the statute requires court approval before there can be any indemnification where the person seeking indemnification has been found liable to the corporation. Our Certificate of Incorporation and Amended Bylaws contain such a provision.

We have in effect a directors and officers liability insurance policy indemnifying our directors and officers for certain liabilities incurred by them, including liabilities under the Securities Act and the Exchange Act. We pay the entire premium of this policy.

We have entered into indemnification agreements with each of our directors and officers that provide the maximum indemnity allowed to directors and officers by Section 145 of the DGCL and which allow for certain additional procedural protections.

These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of our officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act.

Item 16. Exhibits

Exhibit No.	Description
1.1	Form of Underwriting Agreement.**
3.1	<a href="#">Amended and Restated Certificate of Incorporation of Dermata Therapeutics, Inc. (incorporated by reference to Exhibit 3.2 of the Company's Registration Statement on Form S-1 filed with the SEC on August 6, 2021).</a>
3.2	<a href="#">Amendment No.1 of the Amended and Restated Certificate of Incorporation of Dermata Therapeutics, Inc. (incorporated by reference to Exhibit 3.1 of the Company's Report on Form 8-K filed July 11, 2022).</a>
3.3	<a href="#">Amendment No. 2 to the Amended and Restated Certificate of Incorporation of Dermata Therapeutics, Inc., dated March 13, 2023. (incorporated by reference to Exhibit 3.1 to the Company's Current Report file on Form 8-K filed on March 13, 2023).</a>
3.4	<a href="#">Amendment No. 3 to the Amended and Restated Certificate of Incorporation of Dermata Therapeutics, Inc., dated May 14, 2024 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed with the SEC on May 14, 2024).</a>
3.5	<a href="#">Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Dermata Therapeutics, Inc., dated July 30, 2025 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed with the SEC on July 30, 2025)</a>
3.6	<a href="#">Amended and Restated Bylaws of Dermata Therapeutics, Inc. (incorporated by reference to Exhibit 3.4 of the Company's Registration Statement on Form S-1 filed with the SEC on August 6, 2021).</a>
3.7	<a href="#">Amendment No. 1 of the Amended and Restated Bylaws of Dermata Therapeutics, Inc. (incorporated by reference to Exhibit 3.1 of the Company's Report on Form 8-K filed September 23, 2022).</a>
4.1	<a href="#">Specimen Certificate representing shares of common stock of Dermata Therapeutics, Inc. (incorporated by reference to Exhibit 4.1 of the Company's Registration Statement on Form S-1 filed with the SEC on August 6, 2021).</a>
4.2	Specimen Preferred Stock Certificate.**
4.3	Form of Warrant Agreement.**
4.4	Form of Warrant Certificate.**
4.5	<a href="#">Form of Senior Debt Indenture.*</a>
4.6	<a href="#">Form of Subordinated Debt Indenture.*</a>
4.7	<a href="#">Form of Senior Note (included in Exhibit 4.5).*</a>
4.8	<a href="#">Form of Subordinated Note (included in Exhibit 4.6).*</a>
4.9	Form of Unit Agreement.**
4.10	Form of Subscription Agreement.**
5.1	<a href="#">Opinion of Lowenstein Sandler LLP.*</a>
23.1	<a href="#">Consent of Baker Tilly US LLP*</a>
23.2	<a href="#">Consent of Lowenstein Sandler LLP (included in Exhibit 5.1).*</a>
24.1	<a href="#">Power of Attorney (included on the signature page).*</a>
25.1	Statement of Eligibility on Form T-1 of the Trustee for the Senior Debt Indenture.***
25.2	Statement of Eligibility on Form T-1 of the Trustee for the Subordinated Debt Indenture.***
107	<a href="#">Filing Fee table*</a>

\* Filed herewith.

\*\* To be filed, if applicable, by amendment or by a report filed under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, and incorporated herein by reference.

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

## Item 17. Undertakings

(a) The undersigned Registrant hereby undertakes:

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

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933,

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and,

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

*provided, however*, that paragraphs (a)(1)(i), (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 reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.

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

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

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

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

(B) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof, provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

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

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

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

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

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

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

(d) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of San Diego, California, as of November 21, 2025.

**DERMATA THERAPEUTICS, INC.**

By: /s/ Gerald T. Proehl  
Gerald T. Proehl  
Chief Executive Officer

**KNOW ALL MEN BY THESE PRESENTS**, that each person whose signature appears below constitutes and appoints Gerald T. Proehl and Kyri K. Van Hoose, and each of them, each with full power to act without the other, his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for such person and in his or her name, place and stead, in any and all capacities, to sign any amendments to this registration statement, and to sign any registration statement for the same offering covered by this registration statement, including post-effective amendments or registration statements filed pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming that each of said such attorneys-in-fact and agents or his substitute or substitutes, may do or cause to be done by virtue hereof.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Gerald T. Proehl</u> Gerald T. Proehl	President, Chief Executive Officer and Chairman (Principal Executive Officer)	November 21, 2025
<u>/s/ Kyri K. Van Hoose</u> Kyri K. Van Hoose	Chief Financial Officer (Principal Financial and Accounting Officer)	November 21, 2025
<u>/s/ David Hale</u> David Hale	Lead Director	November 21, 2025
<u>/s/ Wendell Wierenga</u> Wendell Wierenga, Ph.D.	Director	November 21, 2025
<u>/s/ Kathleen Scott</u> Kathleen Scott	Director	November 21, 2025
<u>/s/ Steven J. Mento</u> Steven J. Mento, Ph.D.	Director	November 21, 2025
<u>/s/ Mary Fisher</u> Mary Fisher	Director	November 21, 2025
<u>/s/ Andrew Sandler</u> Andrew Sandler, M.D.	Director	November 21, 2025
<u>/s/ Brittany Bradrick</u> Brittany Bradrick	Director	November 21, 2025

**DERMATA THERAPEUTICS. INC., as Issuer**  
and  
**[•], as Trustee**  
**INDENTURE**  
Dated as of •  
**Senior Debt Securities**

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CROSS REFERENCE SHEET<sup>1</sup>

Between

Provisions of the Trust Indenture Act of 1939 and the Indenture to be dated as of \_\_\_\_\_, 20\_\_\_\_ between DERMATA THERAPEUTICS, INC. and \_\_\_\_\_, as Trustee:

Section of the Act	Section of Indenture
310(a)(1) and (2)	5.08
310(a)(3) and (4)	Inapplicable
310(b)	5.09(a), (b) and (d)
310(c)	Inapplicable
311(a)	Inapplicable
311(b)	Inapplicable
311(c)	Inapplicable
312(a)	3.05
312(b)	3.05
312(c)	4.02(c)
313(a)	5.12
313(b)(1)	5.12
313(b)(2)	5.12
313(c)	5.12
313(d)	5.12
314(a)	3.06
314(b)	Inapplicable
314(c)(1) and (2)	10.05
314(c)(3)	Inapplicable
314(d)	Inapplicable
314(e)	10.05
314(f)	Inapplicable
315(a), (c) and (d)	5.01
315(b)	4.11
315(e)	4.12
316(a)(1)	4.09
316(a)(2)	Not required
316(a) (last sentence)	6.04
316(b)	4.07
317(a)	4.02
317(b)	3.03(a) and (b)
318(a)	10.07

<sup>1</sup> This Cross Reference Sheet is not part of the Indenture.

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THIS INDENTURE, dated as of \_\_\_\_\_, between DERMATA THERAPEUTICS, INC., a Delaware corporation (the “**Issuer**”) and ●, a ● corporation, as trustee (the “**Trustee**”).

WITNESSETH:

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

WHEREAS, all things necessary to make this Indenture a valid indenture and agreement according to its terms have been done;

NOW, THEREFORE:

In consideration of the premises and the purchases of the Securities by the Holders thereof, the Issuer and the Trustee mutually covenant and agree for the equal and proportionate benefit of the respective Holders from time to time of the Securities as follows:

ARTICLE 1  
DEFINITIONS

Section 1.01 *Certain Terms Defined.* The following terms (except as otherwise expressly provided or unless the context otherwise clearly requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section. All other terms used in this Indenture that are defined in the Trust Indenture Act of 1939 or the definitions of which in the Securities Act of 1933 are referred to in the Trust Indenture Act of 1939, as amended, including terms defined therein by reference to the Securities Act of 1933, as amended, (except as herein otherwise expressly provided or unless the context otherwise clearly requires), shall have the meanings assigned to such terms in said Trust Indenture Act and in said Securities Act as in force at the date of this Indenture. All accounting terms used herein and not expressly defined shall have the meanings assigned to such terms in accordance with GAAP. The words “**herein**”, “**hereof**” and “**hereunder**” and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision. The terms defined in this Article have the meanings assigned to them in this Article and include the plural as well as the singular.

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

“**Authorized Newspaper**” means a newspaper in the English language or in an official language of the country of publication, customarily printed on each Business Day, whether or not published on Saturdays, Sundays or holidays, and of general circulation in the place in connection with which the term is used or in the financial community of such place. If, because of temporary suspension of publication or general circulation of any newspaper or for any other reason, it is impossible or impracticable to make any publication of any notice required by this Indenture in the manner herein provided, such publication or other notice in lieu thereof which is made at the written direction of the Issuer by the Trustee shall constitute a sufficient publication of such notice.

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

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

“**Capitalized Lease**” means, as applied to any Person, any lease of any property (whether real, personal, or mixed) of which the discounted present value of the rental obligations of such Person as lessee, in conformity with GAAP, is required to be capitalized on the balance sheet of such Person; and “**Capitalized Lease Obligation**” is defined to mean the rental obligations, as aforesaid, under such lease.

“**Capital Stock**” means any and all shares, interests, participations or other equivalents (however designated, whether voting or non-voting) of the Issuer’s capital stock or other ownership interests, whether now outstanding or issued after the date of this Indenture, including, without limitation, all Common Stock and Preferred Stock.

“**Closing Price**” on any day when used with respect to any class of Capital Stock means the closing sale price per share (or if no closing sale price is reported, the average of the bid and ask prices or, if more than one in either case, the average of the average bid and the average ask prices) on that date as reported by The Nasdaq Capital Market or, if such Capital Stock is not listed on The Nasdaq Capital Market, then on the principal U.S. national or regional securities exchange on which such Capital Stock is then listed. If such Capital Stock is not listed on either The Nasdaq Capital Market or on any U.S. national or regional securities exchange on the relevant date, the Closing Price will be the last quoted bid price for the Company’s Common Stock in the over-the-counter market on the relevant date as reported by the OTC Markets Group Inc. or similar organization. In the event that no such quotation is available for any day, the Board of Directors shall be entitled to determine in good faith the current market price on the basis of such quotations as it considers appropriate.

“**Commission**” means the Securities and Exchange Commission, as from time to time constituted, created under the Securities Exchange Act of 1934, or if at any time after the execution and delivery of this Indenture such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties on such date.

“**Common Stock**” means any and all shares, interests, participations or other equivalents (however designated, whether voting or non-voting) of the Issuer’s common stock, par value \$0.0001 per share, whether now outstanding or issued after the date of the Indenture, including, without limitation, all series and classes of such common stock.

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

“**Currency Agreement**” means any foreign exchange contract, currency swap agreement, or other similar agreement or arrangement designed to protect against the fluctuation in currency values.

“**Default**” means any Event of Default as defined in Section 4.01 and any event that is, or after notice or passage of time or both would be, an Event of Default.

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

“**Determination Date**” has the meaning specified in Section 12.05.

“**Event of Default**” has the meaning specified in Section 4.01.

“**GAAP**” means generally accepted accounting principles in the United States of America as in effect as of the date of determination, including, without limitation, those 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 approved by a significant segment of the accounting profession. All ratios and computations contained in this Indenture shall be computed in conformity with GAAP applied on a consistent basis.

“**Guarantee**” means any obligation, contingent or otherwise, of any Person directly or indirectly guaranteeing any Indebtedness or other obligation of any other Person and, without limiting the generality of the foregoing, any obligation, direct or indirect, contingent or otherwise, of such Person:

(i) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other obligation of such other Person (whether arising by virtue of partnership arrangements, or by agreement to keep-well, to purchase assets, goods, securities, or services, to take-or-pay, or to maintain financial statement conditions or otherwise); or

(ii) entered into for purposes of assuring in any other manner the obligee of such Indebtedness or other obligation of the payment thereof or to protect such obligee against loss in respect thereof (in whole or in part);

*provided*, that the term “**Guarantee**” shall not include endorsements for collection or deposit in the ordinary course of business. The term “**Guarantee**” used as a verb has a corresponding meaning.

“**Holder**”, “**Securityholder**” or other similar terms mean the registered holder of any Security.

“**Indebtedness**” means, with respect to any Person at any date of determination (without duplication):

(i) all indebtedness of such Person for borrowed money;

(ii) all obligations of such Person evidenced by bonds, debentures, notes, or other similar instruments, in each case, for value received or settlement of claims;

(iii) all obligations of such Person in respect of letters of credit or other similar instruments (including reimbursement obligations with respect thereto);

(iv) all obligations of such Person to pay the deferred and unpaid purchase price of property or services (but excluding trade accounts payable or accrued liabilities arising in the ordinary course of business);

(v) all obligations of such Person as lessee under Capitalized Leases;

(vi) all Indebtedness of other Persons secured by a Lien on any asset of such Person, whether or not such Indebtedness is assumed by such Person; *provided* that the amount of such Indebtedness shall be the lesser of:

(1) the fair market value of such asset at such date of determination; and

(2) the amount of such Indebtedness;

(vii) all Indebtedness of other Persons to the extent Guaranteed by such Person; and

(viii) to the extent not otherwise included in this definition, obligations under Currency Agreements and Interest Rate Agreements.

Notwithstanding the foregoing, in no event shall the term “Indebtedness” be deemed to include letters of credit or bonds that secure performance or surety bonds or similar instruments that are issued in the ordinary course of business.

The amount of Indebtedness of any Person at any date shall be the outstanding balance at such date of all unconditional obligations as described above and, with respect to contingent obligations, the maximum liability upon the occurrence of the contingency giving rise to the obligation; provided that:

(x) the amount outstanding at any time of any Indebtedness issued with original issue discount is the face amount of such Indebtedness less the remaining unamortized portion of the original issue discount of such Indebtedness at such time as determined in conformity with GAAP; and

(y) Indebtedness shall not include any liability for federal, state, local, or other taxes.

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

**“Interest”** means, when used with respect to non-interest bearing Securities, interest payable after maturity. **“Interest Rate Agreement”** means any obligation of any Person pursuant to any interest rate swap, cap, collar or similar arrangement providing protection against fluctuations in interest rates. For purposes of the Indenture, the amount of such obligation shall be the amount determined in respect thereof as of the end of the then most recently ended fiscal quarter of such Person, based on the assumption that such obligation had terminated at the end of such fiscal quarter, and in making such determination, if any agreement relating to such obligation provides for the netting of amounts payable by and to such Person thereunder or if any such agreement provides for the simultaneous payment of amounts by and to such Person, then in each such case, the amount of such obligation shall be the net amount so determined, plus any premium due upon default by such Person.

**“Issuer”** means the Person identified as “Issuer” in the first paragraph hereof and, subject to Article 8, its successors and assigns.

**“Lien”** means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind, or any other type of preferential arrangement that has the practical effect of creating a security interest, in respect of such asset. For the purposes of this Indenture, the Issuer shall be deemed to own subject to a Lien any asset that it has acquired or holds subject to the interest of a vendor or lessor under any conditional sale agreement, capital lease or other title retention agreement relating to such asset.

**“Officers’ Certificate”** means a certificate signed by the chairman of the Issuer’s Board of Directors, any vice president, and by its treasurer, any assistant treasurer, its secretary or any assistant secretary of the Issuer, and delivered to the Trustee. Each such certificate shall comply with Section 314 of the Trust Indenture Act of 1939 and include the statements provided for in Section 10.05.

**“Opinion of Counsel”** means an opinion in writing signed by legal counsel who may be an employee of or counsel to the Issuer and who shall be satisfactory to the Trustee. Each such opinion shall comply with Section 314 of the Trust Indenture Act of 1939 and include the statements provided for in Section 10.05, if and to the extent required hereby.

**“Original Issue Date”** of any Security (or portion thereof) means the earlier of (i) the date of such Security or (ii) the date of any Security (or portion thereof) for which such Security was issued (directly or indirectly) on registration of transfer, exchange or substitution.

**“Original Issue Discount Security”** means any Security that provides for an amount less than the Principal amount thereof to be due and payable upon a declaration of acceleration of the maturity thereof pursuant to Section 4.01.

“**Outstanding**”, when used with reference to Securities, shall, subject to the provisions of Section 6.04, mean, as of any particular time, all Securities authenticated and delivered by the Trustee under this Indenture, except:

(i) Securities theretofore canceled by the Trustee or delivered to the Trustee for cancellation;

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

(iii) Securities in substitution for which other Securities shall have been authenticated and delivered, or which shall have been paid, pursuant to the terms of Section 2.09 (except with respect to any such Security as to which proof satisfactory to the Trustee is presented that such Security is held by a person in whose hands such Security is a legal, valid and binding obligation of the Issuer).

In determining whether the Holders of the requisite Principal amount of Outstanding Securities of any or all series have given any request, demand, authorization, direction, notice, consent or waiver hereunder, the Principal amount of an Original Issue Discount Security that shall be deemed to be Outstanding for such purposes shall be the amount of the Principal thereof that would be due and payable as of the date of such determination upon a declaration of acceleration of the maturity thereof pursuant to Section 4.01.

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

“**Preferred Stock**” means any and all shares, interests, participations or other equivalents (however designated, whether voting or non-voting) of the Issuer’s preferred stock, par value \$0.0001 per share, whether now outstanding or issued after the date of the Indenture, including, without limitation, all series and classes of such preferred stock.

“**Principal**” means, with respect to the Securities or any Security or any portion thereof, the principal amount of such Securities, Security or portion thereof, and shall be deemed to include “and premium, if any”.

“**record date**” as used with respect to any interest payment date (except a date for payment of defaulted interest), has the meaning specified in Section 2.07.

“**Registered Global Security**” means a Security evidencing all or a part of a series of Registered Securities, issued to the Depository for such series in accordance with Section 2.04, and bearing the legend prescribed in Section 2.04.

“**Registered Security**” means any Security registered on the register maintained by the Issuer pursuant to Section 2.08.

“**Responsible Officer**” when used with respect to the Trustee means any officer within the corporate trust department of the Trustee, including any vice president, assistant vice president, assistant secretary, assistant treasurer, trust officer or any other officer of the Trustee who customarily performs functions similar to those performed by the Persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of such person’s knowledge of and familiarity with the particular subject and who shall have direct responsibility for the administration of this Indenture.

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

“**Subsidiary**” means, with respect to any Person, any corporation, association or other business entity of which more than 50% of all votes represented by all classes of outstanding Voting Stock is owned, directly or indirectly, by such Person and one or more other Subsidiaries of such Person.

“**Trustee**” means the Person identified as “**Trustee**” in the first paragraph hereof and, subject to the provisions of Article 5, shall also include any successor trustee.

“**Trust Indenture Act of 1939**” (except as otherwise provided in Section 7.01 and 7.02) means the Trust Indenture Act of 1939 as in force at the date as of which this Indenture was originally executed.

“**UCC**” means the Uniform Commercial Code, as in effect in each applicable jurisdiction.

“**Unregistered Security**” means any Security other than a Registered Security.

“**U.S. Government Obligations**” means securities that are (i) direct obligations of the United States of America for the payment of which its full faith and credit is pledged or (ii) obligations of an agency of instrumentality of the United States of America the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such U.S. Government Obligation or a specific payment of interest on or principal of any such U.S. Government Obligation held by such custodian for the account of the holder of a depository receipt; 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 or the specific payment of interest on or principal of the U.S. Government Obligation evidenced by such depository receipt.

“**Voting Stock**” means, with respect to any Person, capital stock of any class or kind ordinarily having the power to vote for the election of directors, managers or other voting members of the governing body of such Person.

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

“**Wholly-Owned**” is defined to mean, with respect to any Subsidiary of any Person, such Subsidiary if all of the outstanding common stock or other similar equity ownership interests (but not including preferred stock) in such Subsidiary (other than any director’s qualifying shares or investments by foreign nationals mandated by applicable law) is owned directly or indirectly by such Person.

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

## ARTICLE 2 SECURITIES

Section 2.01 *Forms Generally*. The Securities of each series shall be substantially in such form (not inconsistent with this Indenture) as shall be established by or pursuant to a resolution of the Board of Directors or in one or more indentures supplemental hereto, in each case with such appropriate insertions, omissions, substitutions and other variations as are required or permitted by this Indenture and may have imprinted or otherwise reproduced thereon such legend or legends, not inconsistent with the provisions of this Indenture, as may be required to comply with any law or with any rules or regulations pursuant thereto, or with any rules of any securities exchange or to conform to general usage, all as may be determined by the officers executing such Securities, as evidenced by their execution of the Securities. The Issuer shall furnish any such legends to the Trustee in writing.

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

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

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

•,  
as Trustee

By:

\_\_\_\_\_  
Authorized Signatory:

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

The Securities may be issued in one or more series. There shall be established in or pursuant to a resolution of the Board of Directors and set forth in an Officers' Certificate, or established in one or more indentures supplemental hereto, prior to the issuance of Securities of any series:

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

(b) any limit upon the aggregate Principal amount of the Securities of the series that may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the series pursuant to Section 2.08, 2.09, 2.11 or Section 12.03);

(c) the date or dates on which the Principal of the Securities of the series is payable;

(d) the rate or rates at which the Securities of the series shall bear interest, if any, or the method by which such rate shall be determined, the date or dates from which such interest shall accrue, the interest payment dates on which such interest shall be payable and the record dates for the determination of Holders to whom interest is payable;

(e) the place or places where the Principal of and any interest on Securities of the series shall be payable (if other than as provided in Section 3.02);

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

(g) the obligation, if any, of the Issuer to redeem, purchase or repay Securities of the series at the option of a Holder thereof and the price or prices at which, the period or periods within which and the terms and conditions upon which Securities of the series shall be redeemed, purchased or repaid, in whole or in part, pursuant to such obligation;

(h) the obligation, if any, of the Issuer to permit the conversion of the Securities of such series into Capital Stock, and the terms and conditions upon which such conversion shall be effected (including, without limitation, the initial conversion price or rate, the conversion period and any other provision in addition to or in lieu of those set forth in this Indenture relative to such obligation);

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

(j) if other than the Principal amount thereof, the portion of the Principal amount of Securities of the series which shall be payable upon declaration of acceleration of the maturity thereof pursuant to Section 4.01 or provable in bankruptcy pursuant to Section 4.02;

(k) if the Securities of the series are issuable in whole or in part as one or more Registered Global Securities, the identity of the Depositary for such Registered Global Security or Securities;

(l) any other terms of the series (which terms shall not be inconsistent with the provisions of this Indenture); and

(m) any trustees, authenticating or paying agents, transfer agents or registrar or any other agents with respect to the Securities of such series.

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

Section 2.04 *Authentication and Delivery of Securities*. At any time and from time to time after the execution and delivery of this Indenture, the Issuer may deliver Securities of any series executed by the Issuer to the Trustee for authentication, and the Trustee shall thereupon authenticate and deliver such Securities to or upon the written order of the Issuer, such order to be signed by both (a) the chairman of its Board of Directors, any vice president and by its treasurer, any assistant treasurer, its secretary or any assistant secretary, without any further action by the Issuer. In authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities the Trustee shall receive, and (subject to Section 5.01) shall be fully protected in relying upon:

(a) a certified copy of any resolution or resolutions of the Board of Directors authorizing the action taken pursuant to the resolution or resolutions delivered under clause (b) below;

(b) a copy of any resolution or resolutions of the Board of Directors relating to such series, in each case certified by the secretary or an assistant secretary of the Issuer;

(c) an executed supplemental indenture, if any, and the documentation required to be delivered pursuant to Section 7.04;

(d) an Officers' Certificate setting forth the form and terms of the Securities as required pursuant to Section 2.01 and 2.03, respectively and prepared in accordance with Section 10.05;

(e) an Opinion of Counsel, prepared in accordance with Section 10.05, to the effect:

(i) that the form or forms and terms of such Securities have been established by or pursuant to a resolution of the Board of Directors or by a supplemental indenture as permitted by Section 2.01 and 2.03 in conformity with the provisions of this Indenture; and

(ii) that such Securities, when authenticated and delivered by the Trustee and issued by the Issuer in the manner and subject to any conditions specified in such Opinion of Counsel, will constitute valid and binding obligations of the Issuer enforceable against the Issuer in accordance with their terms, except to the extent that enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or similar laws now or hereafter in effect relating to creditors' rights generally, and general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law).

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

If the Issuer shall establish pursuant to Section 2.03 that the Securities of a series or a portion thereof are to be issued in the form of one or more Registered Global Securities, then the Issuer shall execute (in accordance with Section 2.05) and the Trustee shall authenticate and make available for delivery one or more Registered Global Securities that (i) shall represent and shall be denominated in an amount equal to the aggregate Principal amount of all of the Securities of such series issued in such form and not yet canceled, (ii) shall be registered in the name of the Depository for such Registered Global Security or Securities or the nominee of such Depository, (iii) shall be delivered by the Trustee to such Depository or its custodian or pursuant to such Depository's instructions and (iv) shall bear a legend substantially to the following effect: "Unless and until it is exchanged in whole or in part for Securities in definitive registered form, this Security may not be transferred except as a whole by the Depository to a nominee of the Depository or by a nominee of the Depository to the Depository or another nominee of the Depository or by the Depository or any such nominee to a successor Depository or a nominee of such successor Depository."

Section 2.05 *Execution of Securities*. The Securities shall be signed on behalf of the Issuer by the chairman of its Board of Directors, any vice president, its treasurer or any assistant treasurer, under its corporate seal and attested by its secretary or any assistant secretary. Such signatures may be the manual or facsimile signatures of the present or any future such officers. The seal of the Issuer may be in the form of a facsimile thereof and may be impressed, affixed, imprinted or otherwise reproduced on the Securities. Typographical and other minor errors or defects in any such reproduction of the seal or any such signature shall not affect the validity or enforceability of any Security that has been duly authenticated and delivered by the Trustee.

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

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

Section 2.07 *Denomination and Date of Securities; Payments of Interest*. The Securities shall be issuable as registered securities without coupons and in denominations as shall be specified as contemplated by Section 2.03. In the absence of any such specification with respect to the Securities of any series, the Securities of such series shall be issuable in denominations of \$1,000 and any multiple thereof. The Securities shall be numbered, lettered, or otherwise distinguished in such manner or in accordance with such plan as the officers of the Issuer executing the same may determine as evidenced by the execution and authentication thereof.

Each Security shall be dated the date of its authentication, shall bear interest, if any, from the date and shall be payable on the dates, in each case, which shall be specified as contemplated by Section 2.03.

The person in whose name any Security of any series is registered at the close of business on any record date applicable to a particular series with respect to any interest payment date for such series shall be entitled to receive the interest, if any, payable on such interest payment date notwithstanding any transfer or exchange of such Security subsequent to the record date and prior to such interest payment date, except if and to the extent the Issuer shall default in the payment of the interest due on such interest payment date for such series, in which case such defaulted interest shall be paid to the persons in whose names Outstanding Securities for such series are registered at the close of business on a subsequent record date (which shall be not less than five Business Days prior to the date of payment of such defaulted interest) established by notice given by mail by or on behalf of the Issuer to the Holders of Securities not less than 15 days preceding such subsequent record date. The term "**record date**" as used with respect to any interest payment date (except a date for payment of defaulted interest) shall mean the date specified as such in the terms of the Securities of any particular series, or, if no such date is so specified, if such interest payment date is the first day of a calendar month, the fifteenth day of the next preceding calendar month or, if such interest payment date is the fifteenth day of a calendar month, the first day of such calendar month, whether or not such record date is a Business Day.

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

At the option of the Holder thereof, Registered Securities of any series (other than a Registered Global Security, except as set forth below) may be exchanged for a Registered Security or Registered Securities of such series and tenor having authorized denominations and an equal aggregate Principal amount, upon surrender of such Registered Securities to be exchanged at the agency of the Issuer that shall be maintained for such purpose in accordance with Section 3.02 and upon payment, if the Issuer shall so require, of the charges hereinafter provided. If the Securities of any series are issued in both registered and unregistered form, except as otherwise established pursuant to Section 2.03, at the option of the Holder thereof, Unregistered Securities of any series may be exchanged for Registered Securities of such series and tenor having authorized denominations and an equal aggregate Principal amount, upon surrender of such Unregistered Securities to be exchanged at the agency of the Issuer that shall be maintained for such purpose in accordance with Section 3.02 and upon payment, if the Issuer shall so require, of the charges hereinafter provided. At the option of the Holder thereof, if Unregistered Securities of any series, maturity date, interest rate and Original Issue Date are issued in more than one authorized denomination, except as otherwise established pursuant to Section 2.03, such Unregistered Securities may be exchanged for Unregistered Securities of such series and tenor having authorized denominations and an equal aggregate Principal amount, upon surrender of such Unregistered Securities to be exchanged at the agency of the Issuer that shall be maintained for such purpose in accordance with Section 3.02 and upon payment, if the Issuer shall so require, of the charges hereinafter provided. Registered Securities of any series may not be exchanged for Unregistered Securities of such series. Whenever any Securities are so surrendered for exchange, the Issuer shall execute, and the Trustee shall authenticate and make available for delivery, the Securities which the Holder making the exchange is entitled to receive.

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

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

Notwithstanding any other provision of this Section 2.08, unless and until it is exchanged in whole or in part for Securities in definitive registered form, a Registered Global Security representing all or a portion of the Securities of a series may not be transferred except as a whole by the Depository for such series to a nominee of such Depository or by a nominee of such Depository to such Depository or another nominee of such Depository or by such Depository or any such nominee to a successor Depository for such series or a nominee of such successor Depository.

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

The Issuer may at any time and in its sole discretion determine that any Registered Global Securities of any series shall no longer be maintained in global form. In such event, or in the event that there shall have occurred and be continuing an Event of Default with respect to a series of Securities, the Issuer will, upon the request of any Holder, execute, and the Trustee, upon receipt of the Issuer's order for the authentication and delivery of definitive Registered Securities of such series and tenor, will authenticate and make available for delivery, Registered Securities of such series and tenor in any authorized denominations, in an aggregate Principal amount equal to the Principal amount of such Registered Global Securities, in exchange for such Registered Global Securities.

Any time the Registered Securities of any series are not in the form of Registered Global Securities pursuant to the preceding two paragraphs, the Issuer agrees to supply the Trustee with a reasonable supply of certificated Registered Securities without the legend required by Section 2.04 and the Trustee agrees to hold such Registered Securities in safekeeping until authenticated and delivered pursuant to the terms of this Indenture.

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

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

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

Registered Securities issued in exchange for a Registered Global Security pursuant to this Section 2.08 shall be registered in such names and in such authorized denominations as the Depository for such Registered Global Security, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee or an agent of the Issuer or the Trustee. The Trustee or such agent shall deliver such Securities to or as directed by the Persons in whose names such Securities are so registered.

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

Notwithstanding anything herein or in the forms or terms of any Securities to the contrary, none of the Issuer, the Trustee or any agent of the Issuer or the Trustee shall be required to exchange any Unregistered Security for a Registered Security if such exchange would result in adverse Federal income tax consequences to the Issuer (such as, for example, the inability of the Issuer to deduct from its income, as computed for Federal income tax purposes, the interest payable on the Unregistered Securities) under then applicable United States Federal income tax laws. The Trustee and any such agent shall be entitled to rely on an Officers' Certificate or an Opinion of Counsel in determining such result.

Neither the Registrar nor the Issuer shall be required (i) to issue, authenticate, register the transfer of or exchange Securities of any series for a period of 15 days before the mailing of a notice of redemption of such Securities to be redeemed or (ii) to register the transfer of or exchange any Security selected for redemption in whole or in part.

Section 2.09 *Mutilated, Defaced, Destroyed, Lost and Stolen Securities*. In case any temporary or definitive Security shall become mutilated or defaced and shall be surrendered to the Trustee, the Issuer shall execute, and the Trustee shall authenticate and deliver, a new Security of the same series, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated or defaced Security. If the Holder of any Security claims that the Security has been lost, destroyed or wrongfully taken, the Issuer shall execute, and the Trustee shall authenticate and deliver, a new Security of the same series, bearing a number not contemporaneously outstanding, in exchange and substitution for the lost, destroyed or wrongfully taken Security, if the applicant so requests before the Issuer has notice that the Security has been acquired by a protected purchaser, and the applicant furnishes to the Issuer and to the Trustee and any agent of the Issuer or the Trustee such security or indemnity as may be required by them to indemnify and defend and to save each of them harmless and the applicant satisfies other reasonable requirements imposed by the Issuer.

Upon the issuance of any substitute Security, the Issuer may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee and its counsel) connected therewith. In case any Security which has matured or is about to mature or has been called for redemption in full shall become mutilated or defaced or be destroyed, lost or stolen, the Issuer may instead of issuing a substitute Security, pay or authorize the payment of the same (without surrender thereof except in the case of a mutilated or defaced Security), if the applicant for such payment shall furnish to the Issuer and to the Trustee and any agent of the Issuer or the Trustee such security or taking, the applicant shall also furnish to the Issuer and the Trustee and any agent of the Issuer or the Trustee evidence to their satisfaction of the destruction, loss or wrongful taking of such Security and of the ownership thereof.

Every substitute Security of any series issued pursuant to the provisions of this section by virtue of the fact that any such Security is destroyed, lost or stolen shall constitute an additional contractual obligation of the Issuer, whether or not the destroyed, lost or wrongfully taken Security shall be at any time enforceable by anyone and shall be entitled to all the benefits of (but shall be subject to all the limitations of rights set forth in) this Indenture equally and proportionately with any and all other Securities of such series duly authenticated and delivered hereunder. All Securities shall be held and owned upon the express condition that, to the extent permitted by law, the foregoing provisions are exclusive with respect to the replacement or payment of mutilated, defaced or destroyed, lost or wrongfully taken Securities and shall preclude any and all other rights or remedies.

Section 2.10 *Cancellation of Securities; Destruction Thereof*. All Securities surrendered for payment, redemption, repurchase, conversion, registration of transfer or exchange, if surrendered to the Issuer or any agent of the Issuer or the Trustee, shall be delivered to the Trustee for cancellation or, if surrendered to the Trustee, shall be canceled by it; and no Securities shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Indenture. The Trustee shall dispose of canceled Securities held by it in accordance with the record retention policies of the Trustee in effect from time to time and, if such canceled certificates are destroyed, shall deliver a certificate of destruction to the Issuer. If the Issuer shall acquire any of the Securities, such acquisition shall not operate as a redemption or satisfaction of the indebtedness represented by such Securities unless and until the same are delivered to the Trustee for cancellation.

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

Section 2.12 *Computation of Interest*. Except as otherwise specified in the Securities of a series, interest shall be computed on the basis of a 360-day year of twelve 30-day months.

Section 2.13 *CUSIP Numbers*. The Issuer 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 identification numbers printed on the Securities, and any such redemption shall not be affected by any defect in or omission of such numbers. The Issuer will notify the Trustee of any change in the "CUSIP" numbers.

### ARTICLE 3 COVENANTS OF THE ISSUER AND THE TRUSTEE

Section 3.01 *Payment of Principal and Interest*. The Issuer covenants and agrees for the benefit of each series of Securities that it will duly and punctually pay or cause to be paid the Principal of, and interest on, each of the Securities of such series at the place or places, at the respective times and in the manner provided in such Securities. Each installment of interest on the Securities of any series may be paid by mailing checks for such interest payable to or upon the written order of the Holders of Securities entitled thereto as they shall appear on the registry books of the Issuer.

Notwithstanding any provisions of this Indenture and the Securities of any series to the contrary, if the Issuer and a Holder of any Registered Security so agree or if expressly provided pursuant to Section 2.03, payments of interest on, and any portion of the Principal of, such Holder's Registered Security shall be made by the paying agent, upon receipt from the Issuer of immediately available funds by 11:00 a.m., New York City time (or such other time as may be agreed to between the Issuer and the paying agent) or the Issuer, directly to the Holder of such Security (by wire transfer of Federal funds or immediately available funds or otherwise) if the Holder has delivered written instructions to the Trustee 15 days prior to such payment date requesting that such payment will be so made and designating the bank account to which such payments shall be so made and, in the case of payments of Principal, surrenders the same to the Trustee. The Trustee shall be entitled to rely on the last instruction delivered by the Holder pursuant to this Section 3.01 unless a new instruction is delivered 15 days prior to a payment date. The Issuer will indemnify and hold each of the Trustee and any paying agent harmless against any loss, liability or expense (including attorneys' fees and expenses) resulting from any act or omission to act on the part of the Issuer or any such Holder in connection with any such agreement or from making any payment in accordance with any such agreement.

Section 3.02 *Offices for Payments, etc.* So long as any of the Securities remain outstanding, the Issuer will maintain in the Borough of Manhattan, The City of New York an office or agency (n) where the Securities may be presented for payment, (o) where the Securities may be presented for registration of transfer and for exchange as in this Indenture provided, (p) where notices and demands to or upon the Issuer in respect of the Securities or of this Indenture may be served and (q) for Securities of each series that is convertible, where such Securities may be presented for conversion. The Issuer will give to the Trustee written notice of the location of any such office or agency and of any change of location thereof. Unless otherwise specified in accordance with Section 2.03, the Issuer hereby initially designates the Corporate Trust Office of Trustee as the office to be maintained by it for each such purpose. In case the Issuer shall fail to so designate or maintain any such office or agency or shall fail to give such notice of the location or of any change in the location thereof, presentations and demands may be made and notices may be served at the Corporate Trust Office.

Section 3.03 *Paying Agents*. Whenever the Issuer shall appoint a paying agent other than the Trustee with respect to the Securities of any series, it will cause such paying agent to execute and deliver to the Trustee an instrument in which such agent shall agree with the Trustee, subject to the provisions of this Section:

(a) that it will hold all sums received by it as such agent for the payment of the Principal of or interest on the Securities of such series (whether such sums have been paid to it by the Issuer or by any other obligor on the Securities of such series) in trust for the benefit of the Holders of the Securities of such series or of the Trustee;

(b) that it will give the Trustee notice of any failure by the Issuer (or by any other obligor on the Securities of such series) to make any payment of the Principal of or interest on the Securities of such series when the same shall be due and payable; and during the continuance of the failure referred to in clause Section 3.03(b) above.

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

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

Whenever the Issuer shall have one or more paying agents for any series of Securities, it will, on or before each due date of the Principal of or interest on any Securities of such series, deposit with the paying agent or agents for the Securities of such series a sum, by 11:00 a.m. New York City time in immediately available funds on the payment date, sufficient to pay the Principal or interest so becoming due with respect to the Securities of such series, and (unless such paying agent is the Trustee) the Issuer will promptly notify the Trustee in writing of any failure so to act.

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

Anything in this Section 3.03 to the contrary notwithstanding, the agreement to hold sums in trust as provided in this Section 3.03 is subject to the provisions of Section 9.05.

Section 3.04 *Certificate of the Issuer*. Within 120 days after the close of the fiscal year ended ●, and within 120 days after the close of each fiscal year thereafter, the Issuer will furnish to the Trustee a brief certificate (which need not comply with Section 10.05) from the principal executive, financial or accounting officer of the Issuer as to his or her knowledge of the Issuer's compliance with all conditions and covenants under the Indenture (such compliance to be determined without regard to any period of grace or requirement of notice provided under the Indenture).

At the time such certificate is filed, the Issuer will also file with the Trustee a letter or statement of the independent accountants who shall have certified the financial statements of the Issuer for its preceding fiscal year to the effect that, in making the examination necessary for certification of such financial statements, they have obtained no knowledge of any default by the Issuer in the performance or fulfillment of any covenant, agreement or condition contained in this Indenture, which default remains uncured at the date of such letter or statement, or, if they shall have obtained knowledge of any such uncured default, specifying in such letter or statement such default or defaults and the nature and status thereof, it being understood that such accountants shall not be liable directly or indirectly for failure to obtain knowledge of any such default or defaults, and that nothing contained in this Section 3.04 shall be construed to require such accountants to make any investigation beyond the scope required in connection with such examination.

Section 3.05 *List of Securityholders*. If and so long as the Trustee shall not be the Security registrar for the Securities of any series, the Issuer will furnish or cause to be furnished to the Trustee a list in such form as the Trustee may reasonably require of the names and addresses of the Holders of the Securities of such series pursuant to Section 312 of the Trust Indenture Act of 1939 (a) semi-annually not more than 10 days after each record date for the payment of interest on such Securities, as hereinabove specified, as of such record date and on dates to be determined pursuant to Section 2.03 for non-interest bearing Securities in each year and (b) at such other times as the Trustee may request in writing, within 30 days after receipt by the Issuer of any such request as of a date not more than 10 days prior to the time such information is furnished.

Section 3.06 *Reports by the Issuer*. The Issuer covenants to:

(a) file, whether or not required to do so under applicable law, with the Trustee, within 15 days after the Issuer files the same with the Commission:

(i) copies of the annual reports and of the information, documents, and other reports which the Issuer files with the Commission pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934; and

(ii) such additional information, documents and reports with respect to compliance by the Issuer with the conditions and covenants provided for in this Indenture as the Issuer may from time to time file with the Commission; and

(b) transmit to the Securityholders, in the manner and to the extent provided in Section 10.04, such summaries of any information, documents and reports required to be filed with the Trustee pursuant to the provisions of subdivision (a) of this Section 3.06 as may be required by the rules and regulations of the Commission.

Delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee's receipt of such shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Issuer's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officers' Certificates).

Section 3.07 *Corporate Existence*. So long as any of the Securities remain unpaid, the Issuer will at all times (except as otherwise provided or permitted elsewhere in this Indenture) do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence.

Section 3.08 *Restrictions on Mergers, Sales and Consolidations*. So long as any of the Securities remain unpaid, the Issuer will not consolidate or merge with or sell, convey or lease all or substantially all of its property to any other corporation except as permitted in Article 8 hereof.

Section 3.09 *Further Assurances*. From time to time whenever requested by the Trustee, the Issuer will execute and deliver such further instruments and assurances and do such further acts as may be reasonably necessary or proper to carry out more effectually the purposes of this Indenture or to secure the rights and remedies hereunder of the Holders of the Securities of any series.

#### ARTICLE 4 REMEDIES OF THE TRUSTEE AND SECURITYHOLDERS ON EVENT OF DEFAULT

Section 4.01 *Event of Default Defined; Acceleration of Maturity; Waiver of Default*. "Event of Default" with respect to Securities of any series wherever used herein, means any one of the following events which shall have occurred and be continuing (whatever the reason for such Event of Default and whether it shall be voluntary or involuntary or be effected by operation of law or pursuant to any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body):

(a) default by the Issuer in the payment of any installment of interest upon any of the Securities of such series as and when the same shall become due and payable, and continuance of such default for a period of 30 days;

(b) default by the Issuer in the payment of all or any part of the Principal on any of the Securities of such series as and when the same shall become due and payable either at maturity, upon redemption, by declaration or otherwise, and continuance of such default for a period of five days;

(c) default by the Issuer in the performance, or breach by the Issuer, of any of its covenants or agreements in respect of the Securities of such series (other than a covenant or agreement in respect of the Securities of such series a default in whose performance or whose breach is elsewhere in this section specifically dealt with), and continuance of such default or breach for a period of 30 consecutive days after there has been given, by registered or certified mail, to the Issuer by the Trustee or to the Issuer and the Trustee by the Holders of at least 25% in Principal amount of the Outstanding Securities of all series affected thereby, 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;

(d) the entry by a court having jurisdiction in the premises of a decree or order for relief in respect of the Issuer in an involuntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or the appointment of a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or for any substantial part of the Issuer's property and assets or the ordering of the winding up or liquidation of the Issuer's affairs, and the continuance of any such decree or order unstayed and in effect for a period of 90 consecutive days;

(e) the commencement by the Issuer of a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or the consent by the Issuer to the entry of an order for relief in an involuntary case under any such law, or the consent by the Issuer to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or for any substantial part of the Issuer's property, or the making of any general assignment by the Issuer for the benefit of creditors; or

(f) any other Event of Default provided in the supplemental indenture or resolution of the Board of Directors under which such series of Securities is issued or in the form of Security for such series.

If an Event of Default described in clauses 4.01(a), 4.01(b), 4.01(c) or 4.01(f) occurs and is continuing, then, and in each and every such case, unless the Principal of all of the Securities of such series shall have already become due and payable, either the Trustee or the Holders of not less than 25% in aggregate Principal amount of the Securities of any affected series then Outstanding hereunder (each such series voting as a separate class) by notice in writing to the Issuer (and to the Trustee if given by Securityholders), may declare the entire Principal (or, if the Securities of such series are Original Issue Discount Securities, such portion of the Principal amount as may be specified in the terms of such series) of all Securities of such series and the interest accrued thereon, if any, to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable. If an Event of Default described in clauses Section 4.01(d) or Section 4.01(e) occurs and is continuing, then the Principal amount of all the Securities then Outstanding and interest accrued thereon, if any, shall be and become immediately due and payable, without any notice or other action by any Holder or the Trustee, to the full extent permitted by applicable law.

The foregoing provisions, however, are subject to the condition that if, at any time after the Principal (or, if the Securities are Original Issue Discount Securities, such portion of the Principal as may be specified in the terms thereof) of the Securities of any series (or of all the Securities, as the case may be) shall have been so declared due and payable, and before any judgment or decree for the payment of the monies due shall have been obtained or entered as hereinafter provided, the Issuer shall pay or shall deposit with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of such series (or of all the Securities, as the case may be) and the Principal of any and all Securities of such series (or of all the Securities, as the case may be) which shall have become due otherwise than by acceleration (with interest upon such Principal and, to the extent that payment of such interest is enforceable under applicable law, on overdue installments of interest, at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in the Securities of such series (or at the respective rates of interest or Yields to Maturity of all the Securities, as the case may be) to the date of such payment or deposit) and such amount as shall be sufficient to cover reasonable compensation to the Trustee, its agents, attorneys and counsel, and all other expenses and liabilities incurred, and all advances made, by the Trustee except as a result of negligence or bad faith, and if any and all Events of Default under the Indenture, other than the non-payment of the Principal of Securities which shall have become due by acceleration, shall have been cured, waived or otherwise remedied as provided herein, then and in every such case the Holders of a majority in aggregate Principal amount of all the then Outstanding Securities of all such series that have been accelerated, each such series voting as a separate class, by written notice to the Issuer and to the Trustee, may waive all defaults with respect to such series (or with respect to all the Securities, as the case may be) and rescind and annul such declaration and its consequences, but no such waiver or rescission and annulment shall extend to or shall affect any subsequent default or shall impair any right consequent thereon.

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

Section 4.02 *Collection of Indebtedness by Trustee; Trustee May Prove Debt.* The Issuer covenants that (h) in case default shall be made in the payment of any installment of interest on any of the Securities of any series when such interest shall have become due and payable, and such default shall have continued for a period of 30 days or (i) in case default shall be made in the payment of all or any part of the Principal of any of the Securities of any series when the same shall have become due and payable, whether upon maturity of the Securities of such series or upon any redemption or by declaration or otherwise, then in each case upon demand of the Trustee, the Issuer will pay to the Trustee for the benefit of the Holders of the Securities of such series (x) the whole amount that then shall have become due and payable on all Securities of such series for Principal or interest, as the case may be (with interest to the date of such payment upon the overdue Principal and, to the extent that payment of such interest is enforceable under applicable law, on overdue installments of interest at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in the Securities of such series) and (y) in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including reasonable compensation to the Trustee and each predecessor Trustee, their respective agents and counsel, and any expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor Trustee except as a result of its negligence or bad faith.

Until such demand is made by the Trustee, the Issuer may pay the Principal of and interest on the Securities of any series to the registered Holders, whether or not the Principal of and interest on the Securities of such series be overdue.

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

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

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

(b) unless prohibited by applicable law and regulations, to vote on behalf of the Holders of the Securities of any series in any election of a trustee or a standby trustee in arrangement, reorganization, liquidation or other bankruptcy or insolvency proceedings or person performing similar functions in comparable proceedings; and

(c) to collect and receive any monies or other property payable or deliverable on any such claims, and to distribute all amounts received with respect to the claims of the Securityholders and of the Trustee on their behalf; and any trustee, receiver, or liquidator, custodian or other similar official is hereby authorized by each of the Securityholders to make payments to the Trustee, and, in the event that the Trustee shall consent to the making of payments directly to the Securityholders, to pay to the Trustee such amounts as shall be sufficient to cover reasonable compensation to the Trustee, each predecessor Trustee and their respective agents, attorneys and counsel, and all other expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor Trustee except as a result of negligence or bad faith and all other amounts due to the Trustee or any predecessor Trustee pursuant to Section 5.06.

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

All rights of action and of asserting claims under this Indenture, or under any of the Securities, may be enforced by the Trustee without the possession of any of the Securities or the production thereof on any trial or other proceedings relative thereto, and any such action or proceedings instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment, subject to the payment of the expenses, disbursements and compensation of the Trustee, each predecessor Trustee and their respective agents and attorneys, shall be for the ratable benefit of the Holders of the Securities in respect of which such action was taken.

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

Section 4.03 *Application of Proceeds*. Any monies collected by the Trustee pursuant to this Article in respect of any series shall be applied in the following order at the date or dates fixed by the Trustee and, in case of the distribution of such monies on account of Principal or interest, upon presentation of the several Securities in respect of which monies have been collected and stamping (or otherwise noting) thereon the payment, or issuing Securities of such series in reduced Principal amounts in exchange for the presented Securities of like series if only partially paid, or upon surrender thereof if fully paid:

FIRST: To the payment of costs and expenses applicable to such series in respect of which monies have been collected, including reasonable compensation to the Trustee and each predecessor Trustee and their respective agents and attorneys and of all expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor Trustee except as a result of negligence or bad faith, and all other amounts due to the Trustee or any predecessor Trustee pursuant to Section 5.06;

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

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

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

Section 4.04 *Suits for Enforcement*. In case an Event of Default has occurred, has not been waived and is continuing, the Trustee may proceed to protect and enforce the rights vested in it by this Indenture, either at law or in equity or in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in this Indenture or in aid of the exercise of any power granted in this Indenture or to enforce any other legal or equitable right vested in the Trustee by this Indenture or by law.

Section 4.05 *Restoration of Rights on Abandonment of Proceedings*. In case the Trustee shall have proceeded to enforce any right under this Indenture and such proceedings shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Trustee, then and in every such case the Issuer and the Trustee shall be restored respectively to their former positions and rights hereunder, and all rights, remedies and powers of the Issuer, the Trustee and the Securityholders shall continue as though no such proceedings had been taken.

Section 4.06 *Limitations on Suits by Securityholder*. No Holder of any Security of any series shall have any right by virtue or by availing of any provision of this Indenture to institute any action or proceeding at law or in equity or in bankruptcy or otherwise upon or under or with respect to this Indenture, or for the appointment of a trustee, receiver, liquidator, custodian or other similar official or for any other remedy hereunder, unless such Holder previously shall have given to the Trustee written notice of an Event of Default and of the continuance thereof, as hereinbefore provided, and unless also the Holders of not less than 25% in aggregate Principal amount of the Securities of such series then outstanding shall have made written request upon the Trustee to institute such action or proceedings in respect of such Event of Default in its own name as trustee hereunder and shall have offered to the Trustee indemnity satisfactory to the Trustee against the costs, expenses and liabilities to be incurred therein or thereby and the Trustee for 60 days after its receipt of such notice, request and offer of indemnity shall have failed to institute any such action or proceeding and no direction inconsistent with such written request shall have been given to the Trustee pursuant to Section 4.09; it being understood and intended, and being expressly covenanted by the Holder of every Security with every other Holder and the Trustee, that no one or more Holders of Securities of any series shall have any right in any manner whatever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of any other such Holder of Securities, or to obtain or seek to obtain priority over or preference to any other such Holder or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all Holders of Securities of the applicable series. For the protection and enforcement of the provisions of this Section, each and every Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

Section 4.07 *Unconditional Right of Securityholders to Institute Certain Suits*. Notwithstanding any other provision in this Indenture and any provision of any Security, the right of any Holder of any Security to receive payment of the Principal of or interest on such Security on or after the respective due dates expressed in such Security, or to institute suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of such Holder.

Section 4.08 *Powers and Remedies Cumulative; Delay or Omission Not Waiver of Default*. Except as provided in Section 4.06, no right or remedy herein conferred upon or reserved to the Trustee or to the Securityholders is intended to be exclusive of any other right or remedy, and every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

No delay or omission of the Trustee or of any Securityholder to exercise any right or power accruing upon any Event of Default occurring and continuing as aforesaid shall impair any such right or power or shall be construed to be a waiver of any such Event of Default or an acquiescence therein; and, subject to Section 4.06, every power and remedy given by this Indenture or by law to the Trustee or to the Securityholders may be exercised from time to time, and as often as shall be deemed expedient, by the Trustee or by the Securityholders.

Section 4.09 *Control by Securityholders*. The Holders of a majority in aggregate Principal amount of the Securities of each series affected (with each series voting as a separate class) at the time outstanding shall have the right to direct the time, method, and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee with respect to the Securities of such series by this Indenture; provided that such direction shall not be otherwise than in accordance with law and the provisions of this Indenture and provided further that (subject to the provisions of Section 5.01) the Trustee shall have the right to decline to follow any such direction if the Trustee, being advised by counsel, shall determine that the action or proceeding so directed may not lawfully be taken or if the Trustee in good faith by its board of directors, the executive committee, or a trust committee of directors or Responsible Officers of the Trustee shall determine that the action or proceedings so directed would subject the Trustee to personal liability or if the Trustee in good faith shall so determine that the actions or forbearances specified in or pursuant to such direction would be unduly prejudicial to the interests of Holders of the Securities of all series so affected not joining in the giving of said direction.

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

Section 4.10 *Waiver of Past Defaults*. Prior to a declaration of the acceleration of the maturity of the Securities of any series as provided in Section 4.01, the Holders of a majority in aggregate Principal amount of the Securities of such series at the time Outstanding (each such series voting as a separate class) may on behalf of the Holders of all the Securities of such series waive an existing default or Event of Default, except a default in the payment of Principal of or interest on any Security as specified in clauses (a) or (b) of Section 4.01 or in respect of a covenant or provision hereof which cannot be modified or amended without the consent of each Holder affected as provided in Section 7.02. In the case of any such waiver, the Issuer, the Trustee and the Holders of the Securities of each series affected shall be restored to their former positions and rights hereunder, respectively.

Upon any such waiver, such default shall cease to exist and be deemed to have been cured and not to have occurred, and any Event of Default arising therefrom shall be deemed to have been cured, and not to have occurred for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other default or Event of Default or impair any right consequent thereon.

Section 4.11 *Trustee to Give Notice of Default, But May Withhold in Certain Circumstances*. The Trustee shall give to the Securityholders of any series, as the names and addresses of such Holders appear on the registry books, notice by mail of all defaults known to Responsible Officers of the Trustee which have occurred with respect to such series, such notice to be transmitted within 90 days after the occurrence thereof, unless such defaults shall have been cured before the giving of such notice (the term "default" or "defaults" for the purposes of this section being hereby defined to mean any event or condition which is, or with notice or lapse of time or both would become, an Event of Default); *provided that*, except in the case of default in the payment of the Principal of or interest on any of the Securities of such series, the Trustee shall be protected in withholding such notice if and so long as the board of directors, the executive committee, or a trust committee of directors or trustees and/or Responsible Officers of the Trustee in good faith determines that the withholding of such notice is in the interests of the Securityholders of such series.

Section 4.12 *Right of Court to Require Filing of Undertaking to Pay Costs*. All parties to this Indenture agree, and each Holder of any Security by his 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 and expenses, 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; *provided that* the provisions of this Section 4.12 shall not apply to (i) any suit instituted by the Trustee, (ii) any suit instituted by any Securityholder or group of Securityholders of any series holding in the aggregate more than 10% in aggregate Principal amount of the Securities of such series or (iii) any suit instituted by a Holder pursuant to Section 4.07.

## ARTICLE 5 CONCERNING THE TRUSTEE

Section 5.01 *Duties and Responsibilities of the Trustee*. With respect to the Holders of any series of Securities issued hereunder, the Trustee, prior to the occurrence of an Event of Default with respect to the Securities of a particular series and after the curing or waiving of all Events of Default which may have occurred with respect to such series, undertakes to perform such duties and only such duties as are specifically set forth in this Indenture. In case an Event of Default with respect to the Securities of a series has occurred (which has not been cured or waived) the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs.

(a) Prior to the occurrence of an Event of Default with respect to the Securities of any series and after the curing or waiving of all such Events of Default with respect to such series which may have occurred:

(i) the duties and obligations of the Trustee with respect to the Securities of any Series shall be determined solely by the express provisions of this Indenture, and the Trustee shall not be liable except for the performance of such duties and obligations as are specifically set forth in this Indenture, and no implied covenants or obligations shall be read into this Indenture against the Trustee; and

(ii) in the absence of bad faith on the part of the Trustee, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any statements, certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but in the case of any such statements, certificates or opinions which by any provision hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the same to determine whether or not they conform to the requirements of this Indenture.

(b) No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

(i) this subsection (b) shall not be construed to limit the effect of subsection (a) of this Section 5.01;

(ii) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer or Responsible Officers of the Trustee, unless it shall be proved that the Trustee was negligent in ascertaining the pertinent facts; and

(iii) the Trustee shall not be liable with respect to any action taken, suffered or omitted to be taken by it in good faith in accordance with the direction of the Holders 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.

None of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers, if there shall be reasonable ground for believing that the repayment of such funds or adequate indemnity against such liability is not reasonably assured to it.

The provisions of this Section 5.01 are in furtherance of and subject to Sections 315 and 316 of the Trust Indenture Act of 1939.

Whether or not therein expressly provided, every provision of this Indenture relating to the conduct of, affecting the liability of or affording protection to the Trustee shall be subject to the provisions of this Section 5.01.

Section 5.02 *Certain Rights of the Trustee*. In furtherance of and subject to the Trust Indenture Act of 1939, and subject to Section 5.01:

(a) In the absence of bad faith on its part, the Trustee may conclusively rely and shall be protected in acting or refraining from acting upon any resolution, Officers' Certificate or any other certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, coupon, security or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(b) any request, direction, order or demand of the Issuer mentioned herein shall be sufficiently evidenced by an Officers' Certificate (unless other evidence in respect thereof be herein specifically prescribed); and any resolution of the Board of Directors may be evidenced to the Trustee by a copy thereof certified by the secretary or an assistant secretary of the Issuer;

(c) the Trustee may consult with counsel of its selection and any advice or Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted to be taken by it hereunder in good faith and in accordance with such advice or Opinion of Counsel;

(d) the Trustee shall be under no obligation to exercise any of the trusts or powers vested in it by this Indenture at the request, order or direction of any of the Securityholders pursuant to the provisions of this Indenture, unless such Securityholders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities which might be incurred by it in connection with such request, order or direction;

(e) the Trustee shall not be liable for any action taken or omitted by it in good faith and believed by it to be authorized or within the discretion, rights or powers conferred upon it by this Indenture;

(f) prior to the occurrence of an Event of Default hereunder and after the curing or waiving of all Events of Default, the Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, appraisal, bond, debenture, note, coupon, security, or other paper or document unless requested in writing so to do by the Holders of not less than a majority in aggregate Principal amount of the Securities of all series affected then outstanding; provided that, if the payment within a reasonable time to the Trustee of the costs, expenses or liabilities likely to be incurred by it in the making of such investigation is, in the opinion of the Trustee, not reasonably assured to the Trustee by the security afforded to it by the terms of this Indenture, the Trustee may require indemnity satisfactory to it against such expenses or liabilities as a condition to proceeding, and the reasonable expenses of every such investigation shall be paid by the Issuer or, if paid by the Trustee or any predecessor trustee, shall be repaid by the Issuer upon demand;

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

(h) the Trustee shall not be liable for any action taken, suffered or omitted in good faith and believed by it to be authorized or within the discretion, rights or powers conferred upon it by this Indenture;

(i) 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 and this Indenture;

(j) 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; and

(k) the Trustee may request that the Issuer deliver an Officers' Certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture, which Officers' Certificate may be signed by any person authorized to sign an Officers' Certificate, including any person specified as so authorized in any such certificate previously delivered and not superseded.

Section 5.03 *Trustee Not Responsible for Recitals, Disposition of Securities or Application of Proceeds Thereof.* The recitals contained herein and in the Securities, except the Trustee's certificates of authentication, shall be taken as the statements of the Issuer, and the Trustee assumes no responsibility for the correctness of the same. The Trustee makes no representation as to the validity or sufficiency of this Indenture or the Securities. The Trustee shall not be accountable for the use or application by the Issuer of any of the Securities or of the proceeds thereof.

Section 5.04 *Trustee and Agents May Hold Securities; Collections, etc.* The Trustee or any agent of the Issuer or the Trustee, in its individual or any other capacity, may become the owner or pledgee of Securities with the same rights it would have if it were not the Trustee or such agent and may otherwise deal with the Issuer and receive, collect, hold and retain collections from the Issuer with the same rights it would have if it were not the Trustee or such agent.

Section 5.05 *Monies Held by Trustee.* All monies received by the Trustee in trust hereunder need not be segregated from other funds except to the extent required by mandatory provisions of law. Neither the Trustee nor any agent of the Issuer or the Trustee shall be under any liability for interest on any monies received by it hereunder.

Section 5.06 *Compensation and Indemnification of Trustee and Its Prior Claim.* The Issuer covenants and agrees to pay to the Trustee from time to time, and the Trustee shall be entitled to, such compensation as shall be agreed in writing from time to time by the Issuer and the Trustee (which shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust) and the Issuer covenants and agrees to pay or reimburse the Trustee and each predecessor Trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by or on behalf of it in accordance with any of the provisions of this Indenture (including the reasonable compensation and the expenses and disbursements of its counsel and of all agents and other persons not regularly in its employ) except to the extent any such expense, disbursement or advance may arise from its negligence or bad faith. The Issuer also covenants and agrees to indemnify the Trustee and each predecessor Trustee for, and to hold it harmless against, any loss, liability or expense arising out of or in connection with the acceptance or administration of this Indenture or the trusts hereunder and the performance of its duties hereunder, including the costs and expenses of defending itself against or investigating any claim of liability (whether asserted by the Issuer, a Holder or any other Person) in the premises, except to the extent such loss, liability or expense is due to the negligence or bad faith of the Trustee or such predecessor Trustee. The obligations of the Issuer under this section to compensate and indemnify the Trustee and each predecessor Trustee and to pay or reimburse the Trustee and each predecessor Trustee for expenses, disbursements and advances shall constitute additional indebtedness hereunder and shall survive the satisfaction and discharge of this Indenture or the resignation or removal of the Trustee. Such additional indebtedness shall be a senior claim and lien to that of the Securities upon all property and funds held or collected by the Trustee as such, except funds held in trust for the benefit of the Holders of particular Securities, and the Securities are hereby subordinated to such senior claim. The parties agree that if the Trustee renders services following an Event of Default under Section 4.01(d) or 4.01(e), compensation for such services is intended to constitute administrative expense under any bankruptcy law.

Section 5.07 *Right of Trustee to Rely on Officers' Certificate, etc.* Subject to Section 5.01 and 5.02, whenever in the administration of the trusts of this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering or omitting any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of negligence or bad faith on the part of the Trustee, be deemed to be conclusively proved and established by an Officers' Certificate delivered to the Trustee, and such certificate, in the absence of negligence or bad faith on the part of the Trustee, shall be full warrant to the Trustee for any action taken, suffered or omitted by it under the provisions of this Indenture upon the faith thereof.

Section 5.08 *Persons Eligible for Appointment as Trustee.* The Trustee for each series of Securities hereunder shall at all times be a corporation which is eligible in accordance with the provisions of Section 310(a) of the Trust Indenture Act of 1939 and which has (or which is a Wholly-Owned Subsidiary, directly or indirectly, of a bank holding company which has) a combined capital and surplus of \$50,000,000. If such corporation or holding company publishes reports of condition at least annually, pursuant to law or to the requirements of a Federal, State or District of Columbia supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation or holding company shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published.

Section 5.09 *Resignation and Removal; Appointment of Successor Trustee.* (a) The Trustee, or any trustee or trustees hereafter appointed, may at any time resign with respect to one or more or all series of Securities by giving written notice of resignation to the Issuer. Upon receiving such notice of resignation, the Issuer shall promptly appoint a successor trustee or trustees with respect to the applicable series by written instrument in duplicate, executed by authority of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee or trustees. If no successor Trustee shall have been so appointed with respect to any series and have accepted appointment within 30 days after the mailing of such notice of resignation, the resigning Trustee may petition, at the expense of the Issuer, any court of competent jurisdiction for the appointment of a successor Trustee, or any Securityholder who has been a bona fide Holder of a Security or Securities of the applicable series for at least six months may, subject to the provisions of Section 4.12, on behalf of himself and all others similarly situated, petition any such court for the appointment of a successor Trustee. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, appoint a successor Trustee.

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

(i) the Trustee shall fail to comply with the provisions of Section 310(b) of the Trust Indenture Act of 1939 with respect to any series of Securities after written request therefor by the Issuer or by any Securityholder who has been a bona fide Holder of a Security or Securities of such series for at least six months;

(ii) the Trustee shall cease to be eligible in accordance with the provisions of Section 310(a) of the Trust Indenture Act of 1939 and shall fail to resign after written request therefor by the Issuer or by any Securityholder; or

(iii) the Trustee shall become incapable of acting with respect to any series of Securities, or shall be adjudged a bankrupt or insolvent, or a receiver or liquidator of the Trustee or of its property shall be appointed, or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation; then, in any such case, the Issuer may remove the Trustee with respect to the applicable series of Securities and appoint a successor trustee for such series by written instrument, in duplicate, executed by order of the Board of Directors of the Issuer, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor Trustee, or, subject to Section 315(e) of the Trust Indenture Act of 1939, any Securityholder who has been a bona fide Holder of a Security or Securities of such series for at least six months may on behalf of himself and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee with respect to such series. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(c) The Holders of a majority in aggregate Principal amount of the Securities of each series at the time outstanding may at any time remove the Trustee with respect to Securities of such series and appoint a successor Trustee with respect to the Securities of such series by delivering to the Trustee so removed, to the successor Trustee so appointed and to the Issuer the evidence provided in Section 6.01 of the action in that regard taken by the Securityholders.

(d) Any resignation or removal of the Trustee with respect to any series and any appointment of a successor trustee with respect to such series pursuant to any of the provisions of this Section 5.09 shall become effective upon acceptance of appointment by the successor trustee as provided in Section 5.10.

Section 5.10 *Acceptance of Appointment by Successor*. Any successor Trustee appointed as provided in Section 5.09 shall execute and deliver to the Issuer and to its predecessor Trustee an instrument accepting such appointment hereunder, and thereupon the resignation or removal of the predecessor Trustee with respect to all or any applicable series shall become effective and such successor Trustee, without any further act, deed or conveyance, shall become vested with all rights, powers, duties and obligations with respect to such series of its predecessor hereunder, with like effect as if originally named as Trustee for such series hereunder. On the written request of the Issuer or of the successor Trustee, upon payment of its charges then unpaid, the Trustee ceasing to act shall, subject to Section 5.06, pay over to the successor Trustee all monies at the time held by it hereunder and shall execute and deliver an instrument transferring to such successor Trustee all such rights, powers, duties and obligations. Upon request of any such successor Trustee, the Issuer shall execute any and all instruments in writing for more fully and certainly vesting in and confirming to such successor Trustee all such rights and powers. Any Trustee ceasing to act shall, nevertheless, retain a prior claim upon all property or funds held or collected by such Trustee to secure any amounts then due it pursuant to the provisions of Section 5.06.

If a successor Trustee is appointed with respect to the Securities of one or more (but not all) series, the Issuer, the predecessor Trustee and each successor Trustee with respect to the Securities of any applicable series shall execute and deliver an indenture supplemental hereto which shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the predecessor Trustee with respect to the Securities of any series as to which the predecessor Trustee is not retiring shall continue to be vested in the predecessor Trustee, and shall add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee, it being understood that nothing herein or in such supplemental indenture shall constitute such Trustees co-trustees of the same trust and that each such Trustee shall be Trustee of a trust or trusts under separate indentures.

Upon acceptance of appointment by any successor Trustee as provided in this Section 5.10, the Issuer shall mail notice thereof by first-class mail to the Holders of Securities of any series for which such successor Trustee is acting as Trustee at their last addresses as they shall appear in the Security register. If the acceptance of appointment is substantially contemporaneous with the resignation, then the notice called for by the preceding sentence may be combined with the notice called for by Section 5.09. If the Issuer fails to mail such notice within 10 days after acceptance of appointment by the successor Trustee, the successor Trustee shall cause such notice to be mailed at the expense of the Issuer.

Section 5.11 *Merger, Conversion, Consolidation or Succession to Business of Trustee*. Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to all or substantially all the corporate trust business of the Trustee, shall be the successor of the Trustee hereunder, provided that such corporation shall be eligible under the provisions of Section 5.08, without the execution or filing of any paper or any further act on the part of any of the parties hereto, anything herein to the contrary notwithstanding.

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

Section 5.12 *Reports to the Trustee*. The Trustee shall transmit to Holders such reports concerning the Trustee and its actions under this Indenture as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant thereto. If required by Section 313(a) of the Trust Indenture Act, the Trustee shall, within sixty days after each May 15 following the date of the initial issuance of Securities under this Indenture deliver to Holders a brief report, dated as of such May 15, which complies with the provisions of such Section 313(a).

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

ARTICLE 6  
CONCERNING THE SECURITYHOLDERS

Section 6.01 *Evidence of Action Taken by Securityholders*. Any request, demand, authorization, direction, notice, consent, waiver or other action provided by this Indenture to be given or taken by a specified percentage in Principal amount of the Securityholders of any or all series may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such specified percentage of Securityholders in person or by agent duly appointed in writing; and, except as herein otherwise expressly provided, such action shall become effective when such instrument or instruments are delivered to the Trustee. Proof of execution of any instrument or of a writing appointing any such agent shall be sufficient for any purpose of this Indenture and (subject to Section 5.01 and 5.02) conclusive in favor of the Trustee and the Issuer, if made in the manner provided in this Article.

Section 6.02 *Proof of Execution of Instruments and of Holding of Securities; Record Date*. Subject to Section 5.01 and 5.02, the execution of any instrument by a Securityholder or his agent or proxy may be proved by the certificate of any notary public or other officer authorized to take acknowledgment of deeds, that the Person executing such instrument acknowledged to such notary public or other such officer the execution thereof, or by an affidavit of a witness to such execution sworn to before any such notary public or other officer. Where such execution is by an officer of a corporation or association or a member of a partnership on behalf of such corporation, association or partnership, as the case may be, or by any other Person acting in a representative capacity, such certificate or affidavit shall also constitute sufficient proof of such Person's authority. The holding of Securities shall be proved by the Security register or by a certificate of the registrar thereof. The Issuer may set a record date for purposes of determining the identity of Holders of Securities of any series entitled to vote or consent to any action referred to in Section 6.01, which record date may be set at any time or from time to time by notice to the Trustee, for any date or dates (in the case of any adjournment or reconsideration) not more than 60 days nor less than five days prior to the proposed date of such vote or consent, and thereafter, notwithstanding any other provisions hereof, only Holders of Securities of such series of record on such record date shall be entitled to so vote or give such consent or revoke such vote or consent.

Section 6.03 *Holders to be Treated as Owners*. Prior to due presentment of a Security for registration of transfer, the Issuer, the Trustee and any agent of the Issuer or the Trustee may deem and treat the person in whose name any Security shall be registered upon the Security register for such series as the absolute owner of such Security (whether or not such Security shall be overdue and notwithstanding any notation of ownership or other writing thereon) for the purpose of receiving payment of or on account of the Principal of and, subject to the provisions of this Indenture, interest on such Security and for all other purposes, and neither the Issuer nor the Trustee nor any agent of the Issuer or the Trustee shall be affected by any notice to the contrary. All such payments so made to any such person, or upon his order, shall be valid, and, to the extent of the sum or sums so paid, effectual to satisfy and discharge the liability for monies payable upon any such Security.

Section 6.04 *Securities Owned by Issuer Deemed Not Outstanding*. In determining whether the Holders of the requisite aggregate Principal amount of Outstanding Securities of any or all series have concurred in any direction, consent or waiver under this Indenture, Securities which are owned by the Issuer or any other obligor on the Securities with respect to which such determination is being made or by any person directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer or any other obligor on the Securities with respect to which such determination is being made shall be disregarded and deemed not to be Outstanding for the purpose of any such determination, except that for the purpose of determining whether the Trustee shall be protected in relying on any such direction, consent or waiver only Securities as to which the Trustee has received written notice are so owned shall be so disregarded. Securities so owned which have been pledged in good faith may be regarded as Outstanding if the pledgee establishes to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not the Issuer or any other obligor upon the Securities or any person directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer or any other obligor on the Securities. In case of a dispute as to such right, the advice of counsel shall be full protection in respect of any decision made by the Trustee in accordance with such advice. Upon request of the Trustee, the Issuer shall furnish to the Trustee promptly an Officers' Certificate listing and identifying all Securities, if any, known by the Issuer to be owned or held by or for the account of any of the above-described persons; and, subject to Section 5.01 and 5.02, the Trustee shall be entitled to accept such Officers' Certificate as conclusive evidence of the facts therein set forth and of the fact that all Securities not listed therein are Outstanding for the purpose of any such determination.

Section 6.05 *Right of Revocation of Action Taken*. At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 6.01, of the taking of any action by the Holders of the percentage in aggregate Principal amount of the Securities of any or all series, as the case may be, specified in this Indenture in connection with such action, any Holder of a Security the serial number of which is shown by the evidence to be included among the serial numbers of the Securities the Holders of which have consented to such action may, by filing written notice at the Corporate Trust Office and upon proof of holding as provided in this Article, revoke such action so far as concerns such Security. Except as aforesaid any such action taken by the Holder of any Security shall be conclusive and binding upon such Holder and upon all future Holders and owners of such Security and of any Securities issued in exchange or substitution therefor, irrespective of whether or not any notation in regard thereto is made upon any such Security. Any action taken by the Holders of the percentage in aggregate Principal amount of the Securities of any or all series, as the case may be, specified in this Indenture in connection with such action shall be conclusively binding upon the Issuer, the Trustee and the Holders of all the Securities affected by such action.

ARTICLE 7  
SUPPLEMENTAL INDENTURES

Section 7.01 *Supplemental Indentures Without Consent of Securityholders*. The Issuer, when authorized by a resolution of its Board of Directors certified to the Trustee, and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto for one or more of the following purposes:

(a) to evidence the succession of another corporation to the Issuer, or successive successions, and the assumption by the successor corporation of the covenants, agreements and obligations of the Issuer pursuant to Article 8;

(b) (i) to cure any ambiguity or to correct or supplement any provision contained herein or in any supplemental indenture which may be defective or inconsistent with any other provision contained herein or in any supplemental indenture, (ii) to conform the terms of Securities to the description thereof in the prospectus and prospectus supplement (or similar offering document) offering such Securities or (iii) to make such other provisions in regard to matters or questions arising under this Indenture or under any supplemental indenture as the Board of Directors may deem necessary or desirable and which shall not adversely affect the interests of the Holders of the Securities in any material respect;

(c) to establish the form or terms of Securities of any series as permitted by Section 2.01 and 2.03;

(d) to evidence and provide for the acceptance of appointment hereunder by a successor trustee with respect to the Securities of one or more series and to add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one trustee, pursuant to the requirements of Section 5.10;

(e) to comply with any requirements of the Commission in connection with the qualification of this Indenture under the Trust Indenture Act of 1939;

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

(g) to make any change that would not reasonably be expected to adversely affect the rights of any Holder in any material respect;

(h) to add to the covenants of the Issuer such new covenants, restrictions, conditions or provisions as its Board of Directors shall consider to be for the protection of the Holders of Securities, and with respect to which the Trustee has received an Opinion of Counsel to a similar effect, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an Event of Default; provided, that in respect of any such additional covenant, restriction, condition or provision such supplemental indenture may provide for a particular period of grace after default (which period may be shorter or longer than that allowed in the case of other defaults) or may provide for an immediate enforcement upon such an Event of Default or may limit the remedies available to the Trustee upon such an Event of Default or may limit the right of the Holders of a majority in aggregate Principal amount of the Securities of such series to waive such an Event of Default; or

(i) to make any change so long as no Securities are Outstanding.

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

Any supplemental indenture authorized by the provisions of this section may be executed without the consent of the Holders of any of the Securities at the time outstanding, notwithstanding any of the provisions of Section 7.02.

Section 7.02 *Supplemental Indentures With Consent of Securityholders*. With the consent (evidenced as provided in Article 6) of the Holders of not less than a majority in aggregate Principal amount of the Securities at the time Outstanding of all series affected by such supplemental indenture (voting as one class), the Issuer, when authorized by a resolution of its Board of Directors, and the Trustee may, from time to time and at any time, enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of any supplemental indenture or of modifying in any manner the rights of the Holders of the Securities of each such series; provided, that no such supplemental indenture shall without the consent of each Holder affected thereby:

- (a) change the stated maturity of the Principal of, or the time of payment of any installment of interest on, such Holder's Security;
- (b) reduce the Principal thereof or the rate of interest thereon, or any premium payable with respect thereto;
- (c) change any place of payment where, or the currency in which, any Security or any premium or the interest thereon is payable;
- (d) change the provisions for calculating any redemption or repurchase price, including the definitions relating thereto;
- (e) make any change to Section 4.07 or Section 4.10 (except to include other provisions subject to Section 4.10);
- (f) reduce the percentage in Principal amount of outstanding Securities of the relevant series the consent of whose Holders is required for any such supplemental indenture, for any waiver of compliance with any provisions of this Indenture or any defaults and their consequences provided for in this Indenture;
- (g) alter or impair the right to convert any Security at the rate and upon the terms provided in Article 12;
- (h) waive a default in the payment of Principal of or interest on any Security of such Holder (except pursuant to a rescission of acceleration pursuant to Section 4.01);
- (i) adversely affect the rights of such Holder under any mandatory redemption or repurchase provision or any right of redemption or repurchase at the option of such Holder;
- (j) modify any of the provisions of this Section 7.02, except to increase any such percentage or to provide that certain other provisions of this Indenture cannot be modified or waived without the consent of the Holder of each outstanding Security affected thereby; or
- (k) change or waive any provision that, pursuant to a board resolution or indenture supplemental hereto establishing the terms of one or more series of Securities, is prohibited to be so changed or waived.

Upon the written request of the Issuer, accompanied by a copy of a resolution of the Board of Directors certified by the secretary or an assistant secretary of the Issuer authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Securityholders as aforesaid and other documents, if any, required by Section 6.01, the Trustee shall join with the Issuer in the execution of such supplemental indenture unless such supplemental indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion, but shall not be obligated to, enter into such supplemental indenture.

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

Promptly after the execution by the Issuer and the Trustee of any supplemental indenture pursuant to the provisions of this Section, the Issuer shall mail a notice thereof by first class mail to the Holders of Securities of each series affected thereby at their addresses as they shall appear on the registry books of the Issuer, setting forth in general terms the substance of such supplemental indenture. Any failure of the Issuer to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture.

Section 7.03 *Effect of Supplemental Indenture*. Upon the execution of any supplemental indenture pursuant to the provisions hereof, this Indenture shall be and be deemed to be modified and amended in accordance therewith and the respective rights, limitations of rights, obligations, duties and immunities under this Indenture of the Trustee, the Issuer and the Holders of Securities of each series affected thereby shall thereafter be determined, exercised and enforced hereunder subject in all respects to such modifications and amendments, and all the terms and conditions of any such supplemental indenture shall be and be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

Section 7.04 *Documents to Be Given to Trustee*. The Trustee, subject to the provisions of Section 5.01 and 5.02, may receive an Officers' Certificate and an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant to this Article 7 complies with the applicable provisions of this Indenture.

Section 7.05 *Notation on Securities in Respect of Supplemental Indentures*. Securities of any series authenticated and delivered after the execution of any supplemental indenture pursuant to the provisions of this Article may bear a notation in form approved by the Trustee for such series as to any matter provided for by such supplemental indenture or as to any action taken at any such meeting. If the Issuer or the Trustee shall so determine, new Securities of any series so modified as to conform, in the opinion of the Trustee and the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may be prepared by the Issuer, authenticated by the Trustee and delivered in exchange for the Securities of such series then outstanding.

## ARTICLE 8 CONSOLIDATION, MERGER, SALE OR CONVEYANCE

Section 8.01 *Issuer May Consolidate, etc., on Certain Terms*. The Issuer covenants that it will not merge or consolidate with any other Person or sell, convey, transfer, lease or otherwise dispose of all or substantially all of its property and assets to any Person (other than a consolidation with or merger with or into or a sale, conveyance, transfer, lease or other disposition to a Wholly-Owned Subsidiary with a positive net worth; *provided* that, in connection with any such merger of the Issuer with a Wholly-Owned Subsidiary, no consideration (other than common stock) in the surviving person or the Issuer shall be issued or distributed to the stockholders of the Issuer), unless (xiv) either (x) the Issuer shall be the continuing corporation, or the successor corporation or (y) the Person formed by such consolidation or into which the Issuer is merged or that acquires by sale or conveyance substantially all the assets of the Issuer (if other than the Issuer) shall be a corporation or limited liability company organized and validly existing under the laws of the United States of America or any jurisdiction thereof and shall expressly assume the due and punctual payment of the Principal of and interest on all the Securities, according to their tenor, and the due and punctual performance and observance of all of the covenants and conditions of this Indenture to be performed or observed by the Issuer, by supplemental indenture satisfactory to the Trustee, executed and delivered to the Trustee by such Person, (xv) immediately after giving effect to such transaction, no default or Event of Default shall have occurred and be continuing and (xvi) the Issuer delivers to the Trustee an Officers' Certificate and Opinion of Counsel, in each case stating that such consolidation, merger or transfer and such supplemental indenture complies with this Section 8.01 and that all conditions precedent provided for herein relating to such transaction have been complied with; *provided, however*, that the foregoing limitations shall not apply if, in the good faith determination of the Board of Directors, whose determination shall be evidenced by a board resolution certified to the Trustee, the principal purpose of such transaction is to change the state of incorporation of the Issuer; and *provided further* that any such transaction shall not have as one of its purposes the evasion of the foregoing limitations.

Section 8.02 *Successor Corporation Substituted*. In case of any such consolidation, merger, sale, conveyance, transfer, lease or other disposition, and following such an assumption by the successor Person, such successor Person shall succeed to and be substituted for the Issuer, with the same effect as if it had been named herein. Such successor Person may cause to be signed, and may issue either in its own name or in the name of the Issuer prior to such succession any or all of the Securities issuable hereunder which theretofore shall not have been signed by the Issuer and delivered to the Trustee; and, upon the order of such successor Person instead of the Issuer and subject to all the terms, conditions and limitations in this Indenture prescribed, the Trustee, pursuant to the terms hereof, shall authenticate and shall deliver any Securities which previously shall have been signed and delivered by the officers of the Issuer to the Trustee for authentication, and any Securities which such successor Person thereafter shall cause to be signed and delivered to the Trustee for that purpose. All of the Securities so issued shall in all respects have the same legal rank and benefit under this Indenture as the Securities theretofore or thereafter issued in accordance with the terms of this Indenture as though all of such Securities had been issued at the date of the execution hereof.

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

Upon the assumption by the successor Person in the manner described in this Article, the Issuer shall be discharged from all obligations and covenants under this Indenture and the Securities.

ARTICLE 9  
DISCHARGE OF INDENTURE

Section 9.01 *Defeasance Within One Year of Payment*. Except as otherwise provided in this Section 9.01, the Issuer may terminate its obligations under the Securities of any series and this Indenture with respect to Securities of such series if:

(a) all Securities of such series previously authenticated and delivered (other than destroyed, lost or wrongfully taken Securities of such series that have been replaced or Securities of such series for whose payment money or securities have theretofore been held in trust and thereafter repaid to the Issuer, as provided in Section 9.05) have been delivered to the Trustee for cancellation and the Issuer has paid all sums payable by it hereunder; or

(b) (xviii) (A) the Securities of such series mature within one year or all of them are to be called for redemption within one year under arrangements satisfactory to the Trustee for giving the notice of redemption, (B) the Issuer irrevocably deposits in trust with the Trustee, as trust funds solely for the benefit of the Holders of such Securities for that purpose, money or U.S. Government Obligations or a combination thereof sufficient (unless such funds consist solely of money, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee), without consideration of any reinvestment and after payment of all Federal, state and local taxes or other charges and assessments in respect thereof payable by the Trustee, to pay Principal of and interest on the Securities of such series to maturity or redemption, as the case may be, and to pay all other sums payable by it hereunder and (C) the Issuer delivers to the Trustee an Officers' Certificate and an Opinion of Counsel, in each case stating that all conditions precedent provided for herein relating to the satisfaction and discharge of this Indenture with respect to the Securities of such series have been complied with.

With respect to the foregoing clause (i), only the Issuer's obligations under Sections 5.06 and 9.05 in respect of the Securities of such series shall survive. With respect to the foregoing clause (ii), only the Issuer's obligations in Section 2.03 through 2.11, 3.02, 5.06, 5.09 and 9.05 in respect of the Securities of such series shall survive until such Securities of such series are no longer outstanding. Thereafter, only the Issuer's obligations in Section 5.06 and 9.05 in respect of the Securities of such series shall survive. After any such irrevocable deposit, the Trustee shall acknowledge in writing the discharge of the Issuer's obligations under the Securities of such series and this Indenture with respect to the Securities of such series except for those surviving obligations specified above.

Section 9.02 *Defeasance*. Except as provided below, the Issuer will be deemed to have paid and will be discharged from any and all obligations in respect of the Securities of any series and the provisions of this Indenture will no longer be in effect with respect to the Securities of such series (and the Trustee, at the expense of the Issuer, shall execute instruments in form and substance satisfactory to the Issuer and the Trustee acknowledging the same) if the following conditions shall have been satisfied:

(a) the Issuer has irrevocably deposited in trust with the Trustee as trust funds specifically pledged as security for, and dedicated solely to, Holders of the Securities of such series, for payment of the Principal of and interest on the Securities of such series, money or U.S. Government Obligations or a combination thereof sufficient (unless such funds consist solely of money, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee) without consideration of any reinvestment and after payment of all federal, state and local taxes or other charges and assessments in respect thereof payable by the Trustee, to pay and discharge the Principal of and accrued interest on the outstanding Securities of such series to maturity or earlier redemption (irrevocably provided for under arrangements satisfactory to the Trustee), as the case may be;

(b) such deposit will not result in a breach or violation of, or constitute a default under, this Indenture or any other material agreement or instrument to which the Issuer 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 Issuer shall have delivered to the Trustee (1) either (x) a ruling directed to the Trustee received from the Internal Revenue Service to the effect 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 the Issuer's exercise of its option under this Section 9.02 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 and defeasance had not occurred or (y) an Opinion of Counsel to the same effect as the ruling described in clause (x) above and based upon a change in law and (2) an Opinion of Counsel to the effect that the Holders of the Securities of such series have a valid security interest in the trust funds subject to no prior liens under the UCC; and

(e) the Issuer has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, in each case stating that all conditions precedent provided for herein relating to the defeasance contemplated by this Section 9.02 of the Securities of such series have been complied with.

The Issuer's obligations in Section 2.03 through 2.11, 3.02, 5.06, 5.09 and 9.05 with respect to the Securities of such series shall survive until such Securities are no longer outstanding. Thereafter, only the Issuer's obligations in Section 5.06 and 9.05 shall survive.

Section 9.03 *Covenant Defeasance*. The Issuer may omit to comply with any term, provision or condition set forth in Section 3.04, 3.06 or 3.08 (or any other specific covenant relating to the Securities of any series provided for in a Board Resolution or supplemental indenture pursuant to Section 2.03 which may by its terms be defeased pursuant to this Section 9.03), and such omission shall be deemed not to be an Event of Default under clause (c) of Section 4.01, with respect to the outstanding Securities of such series if:

(a) the Issuer has irrevocably deposited in trust with the Trustee as trust funds solely for the benefit of the Holders of the Securities of such series, for payment of the Principal of and interest, if any, on the Securities of such series, money or U.S. Government Obligations or a combination thereof in an amount sufficient (unless such funds consist solely of money, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee) without consideration of any reinvestment and after payment of all Federal, state and local taxes or other charges and assessments in respect thereof payable by the Trustee, to pay and discharge the Principal of and interest on the outstanding Securities of such series to maturity or earlier redemption (irrevocably provided for under arrangements satisfactory to the Trustee), as the case may be;

(b) such deposit will not result in a breach or violation of, or constitute a default under, this Indenture or any other material agreement or instrument to which the Issuer 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 Issuer has delivered to the Trustee an Opinion of Counsel to the effect that (A) the Holders of the Securities of such series have a valid security interest in the trust funds subject to no prior liens under the UCC and (B) such Holders 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 amount and in the same manner and at the same times as would have been the case if such deposit and defeasance had not occurred; and

(e) the Issuer has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, in each case stating that all conditions precedent provided for herein relating to the covenant defeasance contemplated by this Section 9.03 of the Securities of such series have been complied with.

Section 9.04 *Application of Trust Money*. Subject to Section 9.05, the Trustee or Paying Agent shall hold in trust money or U.S. Government Obligations deposited with it pursuant to 9.01, 9.02, or 9.03, as the case may be, in respect of the Securities of any series and shall apply the deposited money and the proceeds from deposited U.S. Government Obligations in accordance with the Securities of such series and this Indenture to the payment of Principal of and interest on the Securities of such series; provided that such money need not be segregated from other funds except to the extent required by law. The Issuer shall pay and indemnify the Trustee against any tax, fee or other charge imposed on or assessed against the U.S. Government Obligations deposited pursuant to 9.01, 9.02, or 9.03, as the case may be, or the Principal and interest received in respect thereof, other than any such tax, fee or other charge that by law is for the account of the Holders.

Section 9.05 *Repayment to Issuer*. Subject to Section 5.06, 9.01, the Trustee and the Paying Agent shall promptly pay to the Issuer upon request set forth in an Officers' Certificate any money held by them at any time and not required to make payments hereunder and thereupon shall be relieved from all liability with respect to such money. Subject to applicable escheat or abandoned property laws, the Trustee and the Paying Agent shall pay to the Issuer upon written request any money held by them and required to make payments hereunder under this Indenture that remains unclaimed for two years; *provided* that the Trustee or such Paying Agent before being required to make any payment shall cause to be published at the expense of the Issuer once in an Authorized Newspaper or mail to each Holder entitled to such money at such Holder's address (as set forth in the register) notice that such money remains unclaimed and that after a date specified therein (which shall be at least 30 days from the date of such publication or mailing) any unclaimed balance of such money then remaining will be repaid to the Issuer. After payment to the Issuer, Holders entitled to such money must look to the Issuer for payment as general creditors unless an abandoned property law designates another Person, and all liability of the Trustee and such Paying Agent with respect to such money shall cease.

#### ARTICLE 10 MISCELLANEOUS PROVISIONS

Section 10.01 *Incorporators, Stockholders, Officers and Directors Exempt from Individual Liability*. No recourse under or upon any obligation, covenant or agreement contained in this Indenture or in any Security, or because of any indebtedness evidenced thereby, shall be had against any incorporator, as such, or against any past, present or future stockholder, officer, director or employee, as such, of the Issuer or of any successor Person thereof, either directly or through the Issuer or any successor Person thereof, under any rule of law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise, all such liability being expressly waived and released by the acceptance of the Securities by the Holders thereof and as part of the consideration for the issue of the Securities.

Section 10.02 *Provisions of Indenture for the Sole Benefit of Parties and Securityholders*. Nothing in this Indenture or in the Securities, expressed or implied, shall give or be construed to give to any person, firm or corporation, other than the parties hereto and their successors and the Holders of the Securities, any legal or equitable right, remedy or claim under this Indenture or under any covenant or provision herein contained, all such covenants and provisions being for the sole benefit of the parties hereto and their successors and of the Holders of the Securities.

Section 10.03 *Successors and Assigns of Issuer Bound by Indenture*. All the covenants, stipulations, promises and agreements contained in this Indenture by or on behalf of the Issuer shall bind its successors and assigns, whether so expressed or not.

Section 10.04 *Notices and Demands on Issuer, Trustee and Securityholders*. Any notice or demand which by any provision of this Indenture is required or permitted to be given or served by the Trustee or by the Holders of Securities to or on the Issuer may be given or served by being deposited postage prepaid, first-class mail (except as otherwise specifically provided herein) addressed (until another address of the Issuer is filed by the Issuer with the Trustee) to Dermata Therapeutics, Inc. at 3525 Del Mar Heights, Rd., #322, San Diego, CA 92130, Attention: Chief Executive Officer. Any notice, direction, request or demand by the Issuer or any Securityholder to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or made at the Corporate Trust Office.

Where this Indenture provides for notice to Holders, such notice shall be sufficiently given (unless otherwise herein expressly provided) if in writing and mailed, first-class postage prepaid, to each Holder entitled thereto, at such Holder's last address as it appears in the Security register. In any case where notice to Holders is given by mail, neither the failure to mail such notice, nor any defect in any notice so mailed, to any particular Holder shall affect the sufficiency of such notice with respect to other Holders. Where this Indenture provides for notice in any manner, such notice may be waived in writing by the person entitled to receive such notice, either before or after the event, and such waiver shall be the equivalent of such notice. Waivers of notice by Holders shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

In case, by reason of the suspension of or irregularities in regular mail service, it shall be impracticable to mail notice to the Issuer and Securityholders when such notice is required to be given pursuant to any provision of this Indenture, then any manner of giving such notice as shall be satisfactory to the Trustee shall be deemed to be a sufficient giving of such notice.

Section 10.05 *Officers' Certificates and Opinions of Counsel; Statements to be Contained Therein*. Upon any application or demand by the Issuer to the Trustee to take any action under any of the provisions of this Indenture, the Issuer shall furnish to the Trustee an Officers' Certificate stating that all conditions precedent provided for in this Indenture relating to the proposed action have been complied with and an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent have been complied with, except that in the case of any such application or demand as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or demand, no additional certificate or opinion need be furnished.

Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant provided for in this Indenture shall include (a) a statement that the person making such certificate or opinion has read such covenant or condition, (b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based, (c) a statement that, in the opinion of such person, he 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.

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

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

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

Section 10.06 *Payments Due on Saturdays, Sundays and Holidays*. If the date of maturity of interest on or Principal of the Securities of any series or the date fixed for redemption or repayment of any such Security shall not be a Business Day, then payment of interest or Principal need not be made on such date, but may be made on the next succeeding Business Day with the same force and effect as if made on the date of maturity or the date fixed for redemption, and no interest shall accrue for the period after such date.

Section 10.07 *Conflict of Any Provision of Indenture with Trust Indenture Act of 1939*. If and to the extent that any provision of this Indenture limits, qualifies or conflicts with another provision incorporated in this Indenture by operation of Sections 310 to 317, inclusive, of the Trust Indenture Act of 1939, such incorporated provision shall control.

Section 10.08 *New York Law to Govern*. This Indenture and each Security shall be deemed to be a contract under the laws of the State of New York, and for all purposes shall be construed in accordance with the laws of such State.

Section 10.09 *Counterparts*. This Indenture may be executed in any number of counterparts, each of which shall be an original; but such counterparts shall together constitute but one and the same instrument.

Section 10.10 *Effect of Headings*. The Article and Section headings herein and the Table of Contents are for convenience only and shall not affect the construction hereof.

ARTICLE 11  
REDEMPTION OF SECURITIES

Section 11.01 *Applicability of Article*. The provisions of this Article shall be applicable to the Securities of any series which are redeemable before their maturity except as otherwise specified as contemplated by Section 2.03 for Securities of such series.

Section 11.02 *Notice of Redemption; Partial Redemptions*. Notice of redemption to the Holders of Securities of any series to be redeemed as a whole or in part at the option of the Issuer shall be given by mailing notice of such redemption by first class mail, postage prepaid, at least 30 days and not more than 60 days prior to the date fixed for redemption to such Holders of Securities of such series at their last addresses as they shall appear upon the registry books. Any notice which is mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the Holder receives the notice. Failure to give notice by mail, or any defect in the notice to the Holder of any Security of a series designated for redemption as a whole or in part shall not affect the validity of the proceedings for the redemption of any other Security of such series.

The notice of redemption to each such Holder shall specify the CUSIP numbers of such Securities to be redeemed, the Principal amount of each Security of such series held by such Holder to be redeemed, the date fixed for redemption, the redemption price, the place or places of payment, that payment will be made upon presentation and surrender of such Securities, that interest accrued to the date fixed for redemption will be paid as specified in such notice and that on and after said date interest thereon or on the portions thereof to be redeemed will cease to accrue. In case any Security of a series is to be redeemed in part only the notice of redemption shall state the portion of the Principal amount thereof to be redeemed, the method the Trustee shall use to determine such Securities to be redeemed as specified in the last paragraph of this Section 11.02, if applicable, and shall state that on and after the date fixed for redemption, upon surrender of such Security, a new Security or Securities of such series in Principal amount equal to the unredeemed portion thereof will be issued.

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

By 11:00 a.m. (New York City time) on the redemption date specified in the notice of redemption given as provided in this Section, the Issuer will deposit with the Trustee or with one or more paying agents (or, if the Issuer is acting as its own paying agent, set aside, segregate and hold in trust as provided in Section 3.03) an amount of money sufficient to redeem on the redemption date all the Securities of such series so called for redemption at the appropriate redemption price, together with accrued interest to the date fixed for redemption. If less than all the outstanding Securities of a series are to be redeemed, the Issuer will deliver to the Trustee at least 70 days (unless a shorter period shall be satisfactory to the Trustee) prior to the date fixed for redemption an Officers' Certificate stating the aggregate Principal amount of Securities to be redeemed.

In the case of the redemption of all of the Securities of a series outstanding, the Issuer shall notify the Trustee in writing of the redemption date 45 days (unless a shorter period shall be satisfactory to the Trustee) prior to the redemption date.

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

Section 11.03 *Payment of Securities Called for Redemption*. If notice of redemption has been given as above provided, the Securities or portions of Securities specified in such notice shall become due and payable on the date and at the place stated in such notice at the applicable redemption price, together with interest accrued to the date fixed for redemption, and on and after said date (unless the Issuer shall default in the payment of such Securities at the redemption price, together with interest accrued to said date) interest on the Securities or portions of Securities so called for redemption shall cease to accrue and, except as provided in Section 5.05 and 9.04, such Securities shall cease from and after the date fixed for redemption to be entitled to any benefit or security under this Indenture, and the Holders thereof shall have no right in respect of such Securities except the right to receive the redemption price thereof and unpaid interest to the date fixed for redemption. On presentation and surrender of such Securities at a place of payment specified in said notice, said Securities or the specified portions thereof shall be paid and redeemed by the Issuer at the applicable redemption price, together with interest accrued thereon to the date fixed for redemption; provided that any semiannual payment of interest becoming due on the date fixed for redemption shall be payable to the Holders of such Securities registered as such on the relevant record date subject to the terms and provisions of Section 2.07 hereof.

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

Upon presentation of any Security redeemed in part only, the Issuer shall execute and the Trustee shall authenticate and deliver to or on the order of the Holder thereof, at the expense of the Issuer, a new Security or Securities of such series, of authorized denominations, in Principal amount equal to the unredeemed portion of the Security so presented, pursuant to Section 2.04, 2.05 and 2.06.

Section 11.04 *Exclusion of Certain Securities from Eligibility for Selection for Redemption*. Securities shall be excluded from eligibility for selection for redemption if they are identified by registration and certificate number in a written statement signed by an authorized officer of the Issuer and delivered to the Trustee at least 40 days prior to the last date on which notice of redemption may be given as being owned of record and beneficially by, and not pledged or hypothecated by either (a) the Issuer or (b) an entity specifically identified in such written statement directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer.

Section 11.05 *Conversion Arrangement On Call For Redemption*. In connection with any redemption of Securities, the Issuer shall deposit the amount due in connection with such redemption as required by Section 11.02 or it may arrange for the purchase and conversion of any Securities called for redemption by an agreement with one or more investment bankers or other purchasers to purchase such Securities and to make the deposit required of it by Section 11.02 on its behalf by paying to the Trustee or the Paying Agent in trust for the Securityholders, on or before 10:00 a.m. New York time on the redemption date, an amount no less than the redemption price, together with interest, if any, accrued to the redemption date of such Securities, in immediately available funds. Notwithstanding anytime to the contrary contained in this Article 11, the obligation of the Issuer to pay the redemption price of such Securities, including all accrued interest, if any, shall be deemed to be satisfied and discharged to the extent such amount is so paid by such purchasers. If such an agreement is entered into, any Securities not duly surrendered for conversion by the Holders thereof may, at the option of the Issuer, be deemed, to the fullest extent permitted by law, acquired by such purchasers from such Holders and (notwithstanding anything to the contrary contained in Article 12) surrendered by such purchasers for conversion, all as of immediately prior to the close of business on the last day on which Securities of such series called for redemption may be converted in accordance with this Indenture and the terms of such Securities, subject to payment of the above amount aforesaid. The Trustee or the Paying Agent shall hold and pay to the Securityholders whose Securities are selected for redemption any such amount paid to it in the same manner as it would monies deposited with it by the Issuer for the redemption of Securities. Without the Trustee's and the Paying Agent's prior written consent, no arrangement between the Issuer and such purchasers for the purchase and conversion of any Securities shall increase or otherwise affect any of the powers, duties, responsibilities or obligations of the Trustee as set forth in this Indenture, and the Issuer agrees to indemnify the Trustee from, and hold it harmless against, any loss, liability or expense arising out of or in connection with any such arrangement for the purchase and conversion of any Securities between the Issuer and such purchasers, including the costs and expenses incurred by the Trustee and the Paying Agent in the defense of any claim or liability arising out of or in connection with the exercise or performance of any of its powers, duties, responsibilities or obligations under this Indenture.

ARTICLE 12  
CONVERSION OF SECURITIES

Section 12.01 *Applicability of Article*. Securities of any series which are convertible into Capital Stock at the option of the Securityholder shall be convertible in accordance with their terms and (unless otherwise specified as contemplated by Section 2.03 for Securities of any series) in accordance with this Article. Each reference in this Article 12 to “a Security” or “the Securities” refers to the Securities of the particular series that is convertible into Capital Stock. Each reference in this Article to “Capital Stock” into which Securities of any series are convertible refers to the class of Capital Stock into which the Securities of such series are convertible in accordance with their terms (as specified as contemplated by Section 2.03). If more than one series of Securities with conversion privileges are outstanding at any time, the provisions of this Article 12 shall be applied separately to each such series.

Section 12.02 *Right of Securityholders to Convert Securities*. Subject to and upon compliance with the terms of the Securities and the provisions of Section 11.05 and this Article 12, at the option of the Holder thereof, any Security of any series of any authorized denomination, or any portion of the Principal amount thereof which is \$1,000 or any integral multiple of \$1,000, may, at any time during the period specified in the Securities of such series, or in case such Security or portion thereof shall have been called for redemption, then in respect of such Security or portion thereof until and including, but not after (unless the Issuer shall default in payment due upon the redemption thereof) the close of business on the Business Day prior to the date fixed for redemption except that in the case of redemption at the option of the Securityholder, if specified in the terms of such Securities, such right shall terminate upon receipt of written notice of the exercise of such option, be converted into duly authorized, validly issued, fully paid and nonassessable shares of Capital Stock, as specified in such Security, at the conversion rate for each \$1,000 Principal amount of Securities (such initial conversion rate reflecting an initial conversion price specified in such Security) in effect on the conversion date, or, in case an adjustment in the conversion rate has taken place pursuant to the provisions of Section 12.05, then at the applicable conversion rate as so adjusted, upon surrender of the Security or Securities, the Principal amount of which is so to be converted, to the Issuer at any time during usual business hours at the office or agency to be maintained by it in accordance with the provisions of Section 3.02, accompanied by a written notice of election to convert as provided in Section 12.03 and, if so required by the Issuer and the Trustee, by a written instrument or instruments of transfer in form satisfactory to the Issuer and the Trustee duly executed by the registered Holder or his attorney duly authorized in writing. All Securities surrendered for conversion shall, if surrendered to the Issuer or any conversion agent, be delivered to the Trustee for cancellation and cancelled by it, or shall, if surrendered to the Trustee, be cancelled by it, as provided in Section 2.10.

The initial conversion price or conversion rate in respect of a series of Securities shall be as specified in the Securities of such series. The conversion price or conversion rate will be subject to adjustment on the terms set forth in Section 12.05 or such other or different terms, if any, as may be specified by Section 2.03 for Securities of such series. Provisions of this Indenture that apply to conversion of all of a Security also apply to conversion of a portion of it.

Section 12.03 *Issuance of Shares of Capital Stock on Conversion*. As promptly as practicable after the surrender, as herein provided, of any Security or Securities for conversion, the Issuer shall deliver or cause to be delivered at its said office or agency to or upon the written order of the Holder of the Security or Securities so surrendered a certificate or certificates representing the number of duly authorized, validly issued, fully paid and nonassessable shares of Capital Stock into which such Security or Securities may be converted in accordance with the terms thereof and the provisions of this Article 12. Prior to delivery of such certificate or certificates, the Issuer shall require a written notice at its said office or agency from the Holder of the Security or Securities so surrendered stating that the Holder irrevocably elects to convert such Security or Securities, or, if less than the entire Principal amount thereof is to be converted, stating the portion thereof to be converted. Such notice shall also state the name or names (with address and social security or other taxpayer identification number) in which said certificate or certificates are to be issued. Such conversion shall be deemed to have been made at the time that such Security or Securities shall have been surrendered for conversion and such notice shall have been received by the Issuer or the Trustee, the rights of the Holder of such Security or Securities as a Securityholder shall cease at such time, the person or persons entitled to receive the shares of Capital Stock upon conversion of such Security or Securities shall be treated for all purposes as having become the record holder or holders of such shares of Capital Stock at such time and such conversion shall be at the conversion rate in effect at such time. In the case of any Security of any series which is converted in part only, upon such conversion, the Issuer shall execute and the Trustee shall authenticate and deliver to the Holder thereof, as requested by such Holder, a new Security or Securities of such series of authorized denominations in aggregate Principal amount equal to the unconverted portion of such Security.

If the last day on which a Security may be converted is not a Business Day in a place where a conversion agent is located, the Security may be surrendered to that conversion agent on the next succeeding day that is a Business Day.

The Issuer will not be required to deliver certificates for shares of Capital Stock upon conversion while its stock transfer books are closed for a meeting of shareholders or for the payment of dividends or for any other purpose, but certificates for shares of Capital Stock shall be delivered as soon as the stock transfer books shall again be opened.

Section 12.04 *No Payment or Adjustment for Interest or Dividends*. Unless otherwise specified as contemplated by Section 2.03 for Securities of such series, Securities surrendered for conversion during the period from the close of business on any regular record date (or special record date for payment of defaulted interest) next preceding any interest payment date to the opening of business on such interest payment date (except Securities called for redemption on a redemption date within such period) when surrendered for conversion must be accompanied by payment of an amount equal to the interest thereon which the registered Holder is to receive on such interest payment date. Payment of interest shall be made, as of such interest payment date or such date, as the case may be, to the Holder of record of the Securities as of such regular, or special record date, as applicable. Except where Securities surrendered for conversion must be accompanied by payment as described above, no interest on converted Securities will be payable by the Issuer on any interest payment date subsequent to the date of conversion. No other payment or adjustment for interest or dividends is to be made upon conversion. Notwithstanding the foregoing, upon conversion of any Original Issue Discount Security, the fixed number of shares of Capital Stock into which such Security is convertible delivered by the Issuer to the Holder thereof shall be applied, first, to pay the accrued original issue discount attributable to the period from the date of issuance to the date of conversion of such Security, and, second, to pay the balance of the Principal amount of such Security.

Section 12.05 *Adjustment of Conversion Rate*. Unless otherwise specified as contemplated by Section 2.03 for Securities of such series, the conversion rate for Securities in effect at any time shall be subject to adjustment as follows:

(a) In case the Issuer shall (i) declare a dividend or make a distribution on the class of Capital Stock into which Securities of such series are convertible in shares of its Capital Stock, (ii) subdivide the outstanding shares of the class of Capital Stock into which Securities of such series are convertible into a greater number of shares, (iii) combine the outstanding shares of the class of Capital Stock into which Securities of such series are convertible into a smaller number of shares or (iv) issue by reclassification of the shares of the class of Capital Stock into which Securities of such series are convertible (including any such reclassification in connection with a consolidation or merger in which the Issuer is the continuing corporation) any shares, the conversion rate for the Securities of such series in effect at the time of the record subdivision, combination or reclassification, shall be proportionately adjusted so that the Holder of any Security of such series surrendered for conversion after such time shall be entitled to receive the number and kind of shares which he would have owned or have been entitled to receive had such Security been converted immediately prior to such time. Similar adjustments shall be made whenever any event listed above shall occur.

(b) In case the Issuer shall fix a record date for the issuance of rights or warrants to all holders of the class of Capital Stock into which Securities of such series are convertible entitling them (for a period expiring within 45 days after such record date) to subscribe for or purchase shares of such class of Capital Stock (or securities convertible into shares of such class of Capital Stock) at a price per share (or, in the case of a right or warrant to purchase securities convertible into such class of Capital Stock, having a conversion price per share, after adding thereto the exercise price, computed on the basis of the maximum number of shares of such class of Capital Stock issuable upon conversion of such convertible securities, per share of such class of Capital Stock, so issuable) less than the current market price per share of such class of Capital Stock (as defined in subsection (e) below) on the date on which such issuance was declared or otherwise announced by the Issuer (the "**Determination Date**"), the number of shares of such class of Capital Stock into which each \$1,000 Principal amount of Securities shall be convertible after such record date shall be determined by multiplying the number of shares of such class of Capital Stock into which such Principal amount of Securities was convertible immediately prior to such record date by a fraction, of which the numerator shall be the number of shares of such class of Capital Stock outstanding on the Determination Date plus the number of additional shares of such class of Capital Stock offered for subscription or purchase (or in the case of a right or warrant to purchase securities convertible into such class of Capital Stock, the aggregate number of additional shares of such class of Capital Stock into which the convertible securities so offered are initially convertible), and of which the denominator shall be the number of shares of such class of Capital Stock outstanding on the Determination Date plus the number of shares of such class of Capital Stock obtained by dividing the aggregate offering price of the total number of shares so offered (or, in the case of a right or warrant to purchase securities convertible into such class of Capital Stock, the aggregate initial conversion price of the convertible securities so offered, after adding thereto the aggregate exercise price of such rights or warrants computed on the basis of the maximum number of shares of such class of Capital Stock issuable upon conversion of such convertible securities) by such current market price. Shares of such class of Capital Stock of the Issuer owned by or held for the account of the Issuer shall not be deemed outstanding for the purpose of any such computation. Such adjustment shall be made successively whenever such a record date is fixed; and to the extent that shares of such class of Capital Stock are not delivered (or securities convertible into shares of such class of Capital Stock are not delivered) after the expiration of such rights or warrants (or, in the case of rights or warrants to purchase securities convertible into such class of Capital Stock once exercised, the expiration of the conversion right of such securities) the conversion rate shall be readjusted to the conversion rate which would then be in effect had the adjustments made upon the issuance of such rights or warrants (or securities convertible into shares) been made upon the basis of delivery of only the number of shares actually delivered. In the event that such rights or warrants are not so issued, the conversion rate shall again be adjusted to be the conversion rate which would then be in effect if such record date had not been fixed.

(c) In case the Issuer shall fix a record date for the making of a distribution to all holders of the class of Capital Stock into which Securities of such series are convertible (including any such distribution made in connection with a consolidation or merger in which the Issuer is the continuing corporation) of evidences of its indebtedness or assets (excluding any cash dividends paid from retained earnings and dividends payable in Capital Stock for which adjustment is made pursuant to subsection (a) above or (d) below) or subscription rights or warrants (excluding subscription rights or warrants to purchase the class of Capital Stock into which Securities of such series are convertible), the number of shares of such class of Capital Stock into which each \$1,000 Principal amount of Securities of such series shall be convertible after such record date shall be determined by multiplying the number of shares of such class of Capital Stock into which such Principal amount of Securities was convertible immediately prior to such record date by a fraction, of which the numerator shall be the fair market value of the assets of the Issuer, after deducting therefrom all liabilities of the Issuer and all preferences (including accrued but unpaid dividends) in respect of classes of Capital Stock having a preference with respect to the assets of the Issuer over such class of Capital Stock (all as determined by the Board of Directors, whose determination shall be conclusive, and described in a certificate signed by chairman of the Issuer's Board of Directors, any vice president, its treasurer, any assistant treasurer, its secretary or any assistant secretary, filed with the Trustee and each conversion agent) on such record date, and of which the denominator shall be such fair market value after deducting therefrom such liabilities and preferences, less the fair market value (as determined by the Board of Directors, whose determination shall be conclusive, and described in a statement filed with the Trustee and each conversion agent) of the assets or evidences of indebtedness, so distributed or of such subscription rights or warrants applicable, so distributed. Such adjustment shall be made successively whenever such a record date is fixed; and in the event that such distribution is not so made, the conversion rate shall again be adjusted to the conversion rate which would then be in effect if such record date had not been fixed.

(d) In case the Issuer shall, by dividend or otherwise, distribute to all holders of its Capital Stock cash (excluding any dividend or distribution in connection with the liquidation, dissolution or winding up of the Issuer, whether voluntary or involuntary), then, in such case, unless the Issuer elects to reserve such cash for distribution to the Holders of the Securities upon the conversion of the Securities so that any such Holder converting Securities will receive upon such conversion, in addition to the shares of Capital Stock to which such Holder is entitled, the amount of cash which such Holder would have received if such Holder had, immediately prior to the record date for such distribution of cash, converted its Securities into Capital Stock, the conversion rate shall be adjusted so that the same shall equal the rate determined by multiplying the conversion rate in effect immediately prior to the record date by a fraction of which the denominator shall be the current market price of the Capital Stock (determined as provided in Section 12.05(e) on the record date less the amount of cash so distributed (and not excluded as provided above) applicable to one share of Capital Stock and the numerator shall be such current market price of the Capital Stock (determined as provided in Section 12.05(e)), such adjustment to be effective immediately prior to the opening of business on the day following the record date; provided, however, that in the event the portion of the cash so distributed applicable to one share of Capital Stock is equal to or greater than the current market price of the Capital Stock (determined as provided in Section 12.05(e) on the record date, in lieu of the foregoing adjustment, adequate provision shall be made so that each Securityholder shall have the right to receive upon conversion the amount of cash such Holder would have received had such Holder converted each Security on the record date. If such dividend or distribution is not so paid or made, the conversion rate shall again be adjusted to be the conversion rate which would then be in effect if such dividend or distribution had not been declared.

(e) For the purpose of any computation under subsections (b) and (d) above and Section 12.06, the current market price per share of the Capital Stock on any date as of which such price is to be computed shall mean the average of the Closing Prices for the 30 consecutive Business Days commencing 45 Business Days before such date.

(f) No adjustment in the conversion rate shall be required unless such adjustment would require a cumulative increase or decrease of at least 1% in such rate; *provided, however*, that any adjustments which by reason of this subsection (f) are not required to be made shall be carried forward and taken into account in any subsequent adjustment; and *provided further*, that adjustments shall be required and made in accordance with the provisions of this Article 12 (other than this subsection (f)) not later than such time as may be required in order to preserve the tax-free nature of a States income tax purposes to the Holders of Securities or the class of Capital Stock into which such Securities are convertible. All calculations under this Article 12 shall be made to the nearest cent or to the nearest one-thousandth of a share, as the case may be. Anything in this Section 12.05 to the contrary notwithstanding, the Issuer shall be entitled to make such adjustments in the conversion rate, in addition to those required by this Section 12.05, as it in its discretion shall determine to be advisable in order that any stock dividend, subdivision of shares, distribution of rights to purchase stock or securities, or distribution of securities convertible into or exchangeable for stock hereafter made by the Issuer to its shareholders shall not be taxable for United States income tax purposes.

(g) Whenever the conversion rate is adjusted, as herein provided, the Issuer shall promptly file with the Trustee and with the office or agency maintained by the Issuer for the conversion of Securities of such series pursuant to Section 3.02, a certificate of a firm of independent public accountants of recognized national standing selected by the Board of Directors (who may be the regular accountants employed by the Issuer) setting forth the conversion rate after such adjustment and setting forth a brief statement of the facts requiring such adjustment and a computation thereof. Such certificate shall be conclusive evidence of the correctness of such adjustment. Neither the Trustee nor any conversion agent shall be under any duty or responsibility with respect to any such certificate or any facts or computations set forth therein, except to exhibit said certificate from time to time to any Securityholder of such series desiring to inspect the same. The Issuer shall promptly cause a notice setting forth the adjusted conversion rate to be mailed to the Holders of Securities of such series, as their names and addresses appear upon the register of the Issuer.

(h) In the event that at any time, as a result of shares of any other class of Capital Stock becoming issuable in exchange or substitution for or in lieu of shares of the class of Capital Stock into which such Securities are convertible or as a result of an adjustment made pursuant to subsection (a) above, the Holder of any Security of such series thereafter surrendered for conversion shall become entitled to receive any shares of the Issuer other than shares of the class of Capital Stock into which the Issuer of such series are convertible, thereafter the number of such other shares so receivable upon conversion of any Security shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to the class of Capital Stock into which the Securities of such series are convertible contained in subsections (a) to (f), inclusive, above, and the provisions of this Article 12 with respect to the class of Capital Stock into which the Securities of such series are convertible shall apply on like terms to any such other shares.

(i) The conversion rate with respect to any Original Issue Discount Security, the terms of which provide for convertibility, shall not be adjusted during the term of such Original Issue Discount Security for accrued original issue discount.

(j) In the event that the Securities of any series are convertible into more than one class of Capital Stock, the provisions of this Section 12.05 shall apply separately to events affecting each such class.

Section 12.06 *No Fractional Shares to Be Issued.* No fractional shares of Capital Stock shall be issued upon conversions of Securities. If more than one Security of any series shall be surrendered for conversion at one time by the same Holder, the number of full shares which shall be issuable upon conversion thereof shall be computed on the basis of the aggregate Principal amount of the Securities of such series (or specified portions thereof to the extent permitted hereby) so surrendered. Instead of a fraction of a share of Capital Stock which would otherwise be issuable upon conversion of any Security or Securities (or specified portions thereof), the Issuer shall pay a cash adjustment in respect of such fraction of a share in an amount equal to the same fractional interest of the current market price (as defined in Section 12.05) per share of Capital Stock on the Business Day next preceding the day of conversion.

Section 12.07 *Preservation of Conversion Rights Upon Consolidation, Merger, Sale or Conveyance.* In case of any consolidation of the Issuer with, or merger of the Issuer into, any other corporation (other than a consolidation or merger in which the Issuer is the continuing corporation), or in the case of any sale or transfer of all or substantially all of the assets of the Issuer, the corporation formed by such consolidation or the corporation into which the Issuer shall have been merged or the corporation which shall have acquired such assets, as the case may be, shall execute and deliver to the Trustee, a supplemental indenture, subject to the provisions of Article 7 and 8 as they relate to supplemental indentures, providing that the Holder of each Security then Outstanding of a series which was convertible into Capital Stock shall have the right thereafter to convert such Security into the kind and amount of shares of stock and other securities and property, including cash, receivable upon such consolidation, merger, sale or transfer by a holder of the number of shares of Capital Stock of the Issuer into which such Securities might have been converted immediately prior to such consolidation, merger, sale or transfer. Such supplemental indenture shall conform to the provisions of the Trust Indenture Act of 1939 as then in effect and shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 12. Neither the Trustee nor any conversion agent shall be under any responsibility to determine the correctness of any provision contained in any such supplemental indenture relating either to the kind or amount of shares of stock or other securities or property receivable by Securityholders upon the conversion of their Securities after any such consolidation, merger, sale or transfer, or to any adjustment to be made with respect there to and, subject to the provisions of Article 5, may accept as conclusive evidence of the correctness of any such provisions, and shall be protected in relying upon, an Opinion of Counsel with respect thereto. If in the case of any such consolidation, merger, sale or transfer, the stock or other securities and property receivable by a Holder of the Securities includes stock or other securities and property of a corporation other than the successor or purchasing corporation, then such supplemental indenture shall also be executed by such other corporation and shall contain such additional provisions to protect the interests of the Holders of the Securities as the Board of Directors shall reasonably consider necessary. The above provisions of this Section 12.07 shall similarly apply to successive consolidations, mergers, sales or transfers.

Section 12.08 *Notice to Security Holders of a Series Prior to Taking Certain Types of Action.* With respect to the Securities of any series, in case:

(a) the Issuer shall authorize the issuance to all holders of the class of Capital Stock into which Securities of such series are convertible of rights or warrants to subscribe for or purchase shares of its Capital Stock or of any other right;

(b) the Issuer shall authorize the distribution to all holders of the class of Capital Stock into which Securities of such series are convertible of evidences of its indebtedness or assets (except for the exclusions with respect to certain dividends set forth in Section 12.05(c));

(c) of any subdivision, combination or reclassification of the class of Capital Stock into which Securities of such series are convertible or of any consolidation or merger to which the Issuer is a party and for which approval by the shareholders of the Issuer is required, or of the sale or transfer of all or substantially all of the assets of the Issuer; or

(d) of the voluntary or involuntary dissolution, liquidation or winding up of the Issuer; then the Issuer shall cause to be filed with the Trustee and at the office or agency maintained for the purpose of conversion of Securities of such series pursuant to Section 3.02, and shall cause to be mailed to the Holders of Securities of such series, at their last addresses as they shall appear upon the register of the Issuer, at least 10 days prior to the applicable record date hereinafter specified, a notice stating (i) the date as of which the holders of such class of Capital Stock to be entitled to receive any such rights, warrants or distribution are to be determined, or (ii) the date on which any such subdivision, combination, reclassification, consolidation, merger, sale, transfer, dissolution, liquidation, winding up or other action is expected to become effective, and the date as of which it is expected that holders of record of such class of Capital Stock shall be entitled to exchange their Capital Stock of such class for securities or other property, if any, deliverable upon such subdivision, combination, reclassification, consolidation, merger, sale, transfer, dissolution, liquidation, winding up or other action. The failure to give the notice required by this Section 12.08 or any defect therein shall not affect the legality or validity of any distribution, right, warrant, subdivision, combination, reclassification, consolidation, merger, sale, transfer, dissolution, liquidation, winding up or other action, or the vote upon any of the foregoing. Such notice shall also be published by and at the expense of the Issuer not later than the aforesaid filing date at least once in an Authorized Newspaper.

Section 12.09 *Covenant to Reserve Shares for Issuance on Conversion of Securities.* The Issuer covenants that at all times it will reserve and keep available out of each class of its authorized Capital Stock, free from preemptive rights, solely for the purpose of issue upon conversion of Securities of any series as herein provided, such number of shares of Capital Stock of such class as shall then be issuable upon the conversion of all Outstanding Securities of such series. The Issuer covenants that an shares of Capital Stock which shall be so issuable shall, when issued or delivered, be duly and validly issued shares of the class of authorized Capital Stock into which Securities of such series are convertible, and shall be fully paid and nonassessable, free of all liens and charges and not subject to preemptive rights and that, upon conversion, the appropriate capital stock accounts of the Issuer will be duly credited.

Section 12.10 *Compliance with Governmental Requirements.* The Issuer covenants that if any shares of Capital Stock required to be reserved for purposes of conversion of Securities hereunder require registration or listing with or approval of any governmental authority under any Federal or State law, pursuant to the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, or any national or regional securities exchange on which such Capital Stock is listed at the time of delivery of any shares of such Capital Stock, before such shares may be issued upon conversion, the Issuer will use reasonable efforts to cause such shares to be duly registered, listed or approved, as the case may be.

Section 12.11 *Payment of Taxes Upon Certificates for Shares Issued Upon Conversion.* The issuance of certificates for shares of Capital Stock upon the conversion of Securities shall be made without charge to the converting Securityholders for any tax (including, without limitation, all documentary and stamp taxes) in respect of the issuance and delivery of such certificates, and such certificates shall be issued in the respective names of, or in such names as may be directed by, the Holders of the Securities converted; provided, however, that the Issuer shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any such certificate in a name other than that of the Holder of the Security converted, and the Issuer shall not be required to issue or deliver such certificates unless or until the person or persons requesting the issuance thereof shall have paid to the Issuer the amount of such tax or shall have established to the satisfaction of the Issuer that such tax has been paid.

Section 12.12 *Trustee's Duties with Respect to Conversion Provisions.* The Trustee and any conversion agent shall not at any time be under any duty or responsibility to any Securityholder to determine whether any facts exist which may require any adjustment of the conversion rate or conversion price, or with respect to the nature or extent of any such adjustment when made, or with respect to the method employed, or herein or in any supplemental indenture provided to be employed, in making the same. Neither the Trustee nor any conversion agent shall be accountable with respect to the registration under securities laws, listing, validity or value (or the kind or amount) of any shares of Capital Stock, or of any other securities or property, which may at any time be issued or delivered upon the conversion of any Security; and neither the Trustee nor any conversion agent makes any representation with respect thereto. Neither the Trustee nor any conversion agent shall be responsible for any failure of the Issuer to make any cash payment or to issue, transfer or deliver any shares of stock or stock certificates or other securities or property upon the surrender of any Security for the purpose of conversion; and the Trustee, subject to the provisions of Article 5, and any conversion agent shall not be responsible for any failure of the Issuer to comply with any of the covenants of the Issuer contained in this Article 12.

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

DERMATA THERAPEUTICS, INC., as Issuer

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

•, as Trustee

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**FORM OF NOTE**

UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE REGISTERED FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY OR BY THE DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR DEPOSITARY. UNLESS THIS SECURITY IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITARY TRUST COMPANY, A NEW YORK CORPORATION (“DTC”), TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY SECURITY ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

DERMATA THERAPEUTICS, INC.

• % Senior Note Due •

No. • CUSIP No.: •  
\$ •

DERMATA THERAPEUTICS, INC., a Delaware corporation (“**Issuer**”, which term includes any successor corporation), for value received promises to pay to CEDE & CO. or its registered assigns, the principal sum of • on •.

Interest Payment Dates: • and • (each, an “**Interest Payment Date**”), commencing on •. Interest Record Dates: • and • (each, an “**Interest Record Date**”).

Reference is made to the further provisions of this Security contained herein, which will for all purposes have the same effect as if set forth at this place.

IN WITNESS WHEREOF, the Issuer has caused this Security to be signed manually or by facsimile by its duly authorized officer.

DERMATA THERAPEUTICS, INC.

By: \_\_\_\_\_  
Name:  
Title:

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

•, as Trustee

By: \_\_\_\_\_  
Authorized Signatory

**(REVERSE OF SECURITY)**  
**DERMATA THERAPEUTICS, INC.**  
**●% Senior Note Due ●**

1. Interest.

DERMATA THERAPEUTICS, INC., a Delaware corporation (the “Issuer”), promises to pay interest on the Principal amount of this Security at the rate per annum shown above. Cash interest on the Securities will accrue from the most recent date to which interest has been paid or, if no interest has been paid, from ●. The Issuer will pay interest semi-annually in arrears on each Interest Payment Date, commencing ●. Interest will be computed on the basis of a 360-day year of twelve 30-day months.

The Issuer shall pay interest on overdue Principal from time to time on demand at the rate borne by the Securities and on overdue installments of interest (without regard to any applicable grace periods) to the extent lawful.

2. Method of Payment.

The Issuer shall pay interest on the Securities (except defaulted interest) to the persons who are the registered Holders at the close of business on the Interest Record Date immediately preceding the Interest Payment Date notwithstanding any transfer or exchange of such Security subsequent to such Interest Record Date and prior to such Interest Payment Date. Holders must surrender Securities to the Trustee to collect Principal payments. The Issuer shall pay Principal and interest in money of the United States that at the time of payment is legal tender for payment of public and private debts (“**U.S. Legal Tender**”). However, the payments of interest, and any portion of the Principal (other than interest payable at maturity or on any redemption or repayment date or the final payment of Principal) shall be made by the Paying Agent, upon receipt from the Issuer of immediately available funds by 11:00 a.m., New York City time (or such other time as may be agreed to between the Issuer and the Paying Agent or the Issuer), directly to a Holder (by Federal funds wire transfer or otherwise) if the Holder has delivered written instructions to the Trustee 15 days prior to such payment date requesting that such payment will be so made and designating the bank account to which such payments shall be so made and in the case of payments of Principal surrenders the same to the Trustee in exchange for a Security or Securities aggregating the same principal amount as the unredeemed Principal amount of the Securities surrendered.

3. Paying Agent.

Initially, ● (the “**Trustee**”) will act as Paying Agent. The Issuer may change any Paying Agent without notice to the Holders.

4. Indenture.

The Issuer issued the Securities under an Indenture, dated as of ● (the “**Indenture**”), between the Issuer and the Trustee. Capitalized terms herein are used as defined in the Indenture unless otherwise defined herein. The terms of the Securities include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939 (15 U.S.C. Sections 77aaa-77bbbb) (the “**TIA**”), as in effect on the date of the Indenture until such time as the Indenture is qualified under the TIA, and thereafter as in effect on the date on which the Indenture is qualified under the TIA. Notwithstanding anything to the contrary herein, the Securities are subject to all such terms, and Holders of Securities are referred to the Indenture and the TIA for a statement of them. To the extent the terms of the Indenture and this Security are inconsistent, the terms of the Indenture shall govern.

5. Denominations; Transfer; Exchange.

The Securities are in registered form, without coupons, in denominations of \$1,000 and multiples of \$1,000. A Holder shall register the transfer of or exchange Securities in accordance with the Indenture. The Issuer may require a Holder, among other things, to furnish appropriate endorsements and transfer documents and to pay certain transfer taxes or similar governmental charges payable in connection therewith as permitted by the Indenture. The Issuer need not issue, authenticate, register the transfer of or exchange any Securities or portions thereof for a period of fifteen (15) days before such series is selected for redemption, nor need the Issuer register the transfer or exchange of any security selected for redemption in whole or in part.

6. Persons Deemed Owners.

The registered Holder of a Security shall be treated as the owner of it for all purposes.

7. Unclaimed Funds.

If funds for the payment of Principal or interest remain unclaimed for two years, the Trustee and the Paying Agent will repay the funds to the Issuer at its written request. After that, all liability of the Trustee and such Paying Agent with respect to such funds shall cease.

8. Legal Defeasance and Covenant Defeasance.

The Issuer may be discharged from its obligations under the Securities and under the Indenture with respect to the Securities except for certain provisions thereof, and may be discharged from obligations to comply with certain covenants contained in the Securities and in the Indenture with respect to the Securities, in each case upon satisfaction of certain conditions specified in the Indenture.

9. Amendment; Supplement; Waiver.

Subject to certain exceptions, the Securities and the provisions of the Indenture relating to the Securities may be amended or supplemented with the written consent of the Holders of at least a majority in aggregate Principal amount of the Securities then outstanding, and any existing Default or Event of Default or compliance with certain provisions may be waived with the consent of the Holders of a majority in aggregate Principal amount of the Securities then outstanding. Without notice to or consent of any Holder, the parties thereto may amend or supplement the Indenture and the Securities to, among other things, cure any ambiguity, defect or inconsistency, provide for uncertificated Securities in addition to or in place of certificated Securities or comply with any requirements of the Commission in connection with the qualification of the Indenture under the Trust Indenture Act, or make any other change that does not adversely affect the rights of any Holder of a Security.

10. Defaults and Remedies.

If an Event of Default (other than certain bankruptcy Events of Default with respect to the Issuer) occurs and is continuing, the Trustee or the Holders of at least 25% in aggregate Principal amount of Securities then outstanding may declare all of the Securities to be due and payable immediately in the manner and with the effect provided in the Indenture. If a bankruptcy Event of Default with respect to the Issuer occurs and is continuing, all the Securities shall be immediately due and payable immediately in the manner and with the effect provided in the Indenture without any notice or other action on the part of the Trustee or any Holder. Holders of Securities may not enforce the Indenture or the Securities except as provided in the Indenture. The Trustee is not obligated to enforce the Indenture or the Securities unless it has received indemnity satisfactory to it. The Indenture permits, subject to certain limitations therein provided, Holders of a majority in aggregate Principal amount of the Securities then outstanding to direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Holders of Securities notice of certain continuing Defaults or Events of Default if it determines that withholding notice is in their interest.

11. Conversion.

Reference is made to the Indenture, including, without limitation, provisions giving the Holder of this Security the right to convert this Security into Capital Stock of the Issuer on the terms and subject to the limitations as more fully specified in the Indenture. The initial conversion rate for this Security is ●. This conversion rate is subject to modification as provided in the Indenture. Such further provisions shall for all purposes have the same effect as though fully set forth at this place.

12. Trustee Dealings with Issuer.

The Trustee under the Indenture, in its individual or any other capacity, may become the owner or pledgee of Securities and may otherwise deal with the Issuer as if it were not the Trustee.

13. No Recourse Against Others.

No stockholder, director, officer, employee or incorporator, as such, of the Issuer or any successor Person thereof shall have any liability for any obligation under the Securities or the Indenture or for any claim based on, in respect of or by reason of, such obligations or their creation. Each Holder of a Security by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issuance of the Securities.

14. Authentication.

This Security shall not be valid until the Trustee manually signs the certificate of authentication on this Security.

15. Abbreviations and Defined Terms.

Customary abbreviations may be used in the name of a Holder of a Security or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian), and U/G/M/A (= Uniform Gifts to Minors Act).

16. CUSIP Numbers.

Pursuant to a recommendation promulgated by the Committee on Uniform Security Identification Procedures, the Issuer has caused CUSIP numbers to be printed on the Securities as a convenience to the Holders of the Securities. No representation is made as to the accuracy of such numbers as printed on the Securities and reliance may be placed only on the other identification numbers printed hereon.

17. Governing Law.

The laws of the State of New York shall govern the Indenture and this Security thereof.

**ASSIGNMENT FORM**

I or we assign and transfer this Security to

\_\_\_\_\_ (Print or type name, address and zip code of assignee or transferee)

\_\_\_\_\_ (Insert Social Security or other identifying number of assignee or transferee)

and irrevocably appoint \_\_\_\_\_ agent to transfer this Security on the books of the Issuer. The agent may substitute another to act for him.

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

Signed: \_\_\_\_\_  
(Signed exactly as name appears on the other side of this Security)

Signature Guarantee:

\_\_\_\_\_  
Participant in a recognized Signature Guarantee Medallion Program (or other signature guarantor program reasonably acceptable to the Trustee)

**DERMATA THERAPEUTICS, INC., as Issuer  
and  
•, as Trustee  
INDENTURE  
Dated as of •  
Subordinated Debt Securities**

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CROSS REFERENCE SHEET<sup>1</sup>

Between

Provisions of the Trust Indenture Act of 1939 and the Indenture to be dated as of \_\_\_\_\_, 20\_\_ between DERMATA THERAPEUTICS, INC. and \_\_\_\_\_, as Trustee:

Section of the Act	Section of Indenture
310(a)(1) and (2)	5.08
310(a)(3) and (4)	Inapplicable
310(b)	5.09(a), (b) and (d)
310(c)	Inapplicable
311(a)	Inapplicable
311(b)	Inapplicable
311(c)	Inapplicable
312(a)	3.05
312(b)	3.05
312(c)	4.02(c)
313(a)	5.12
313(b)(1)	5.12
313(b)(2)	5.12
313(c)	5.12
313(d)	5.12
314(a)	3.06
314(b)	Inapplicable
314(c)(1) and (2)	10.05
314(c)(3)	Inapplicable
314(d)	Inapplicable
314(e)	10.05
314(f)	Inapplicable
315(a), (c) and (d)	5.01
315(b)	4.11
315(e)	4.12
316(a)(1)	4.09
316(a)(2)	Not required
316(a) (last sentence)	6.04
316(b)	4.07
317(a)	4.02
317(b)	3.03(a) and (b)
318(a)	10.07

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<sup>1</sup> This Cross Reference Sheet is not part of the Indenture.

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THIS INDENTURE, dated as of , between DERMATA THERAPEUTICS, INC., a Delaware corporation (the "Issuer") and ●, a ● corporation, as trustee (the "Trustee").

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**WITNESSETH:**

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

WHEREAS, all things necessary to make this Indenture a valid indenture and agreement according to its terms have been done;

NOW, THEREFORE:

In consideration of the premises and the purchases of the Securities by the Holders thereof, the Issuer and the Trustee mutually covenant and agree for the equal and proportionate benefit of the respective Holders from time to time of the Securities as follows:

**ARTICLE 1  
DEFINITIONS**

Section 1.01 *Certain Terms Defined.* The following terms (except as otherwise expressly provided or unless the context otherwise clearly requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section. All other terms used in this Indenture that are defined in the Trust Indenture Act of 1939 or the definitions of which in the Securities Act of 1933 are referred to in the Trust Indenture Act of 1939, as amended, including terms defined therein by reference to the Securities Act of 1933, as amended, (except as herein otherwise expressly provided or unless the context otherwise clearly requires), shall have the meanings assigned to such terms in said Trust Indenture Act and in said Securities Act as in force at the date of this Indenture. All accounting terms used herein and not expressly defined shall have the meanings assigned to such terms in accordance with GAAP. The words “herein”, “hereof” and “hereunder” and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision. The terms defined in this Article have the meanings assigned to them in this Article and include the plural as well as the singular.

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

“**Authorized Newspaper**” means a newspaper in the English language or in an official language of the country of publication, customarily printed on each Business Day, whether or not published on Saturdays, Sundays or holidays, and of general circulation in the place in connection with which the term is used or in the financial community of such place. If, because of temporary suspension of publication or general circulation of any newspaper or for any other reason, it is impossible or impracticable to make any publication of any notice required by this Indenture in the manner herein provided, such publication or other notice in lieu thereof which is made at the written direction of the Issuer by the Trustee shall constitute a sufficient publication of such notice.

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

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

“**Capitalized Lease**” means, as applied to any Person, any lease of any property (whether real, personal, or mixed) of which the discounted present value of the rental obligations of such Person as lessee, in conformity with GAAP, is required to be capitalized on the balance sheet of such Person; and “**Capitalized Lease Obligation**” is defined to mean the rental obligations, as aforesaid, under such lease.

“**Capital Stock**” means any and all shares, interests, participations or other equivalents (however designated, whether voting or non-voting) of the Issuer’s capital stock or other ownership interests, whether now outstanding or issued after the date of this Indenture, including, without limitation, all Common Stock and Preferred Stock.

“**Closing Price**” on any day when used with respect to any class of Capital Stock means the closing sale price per share (or if no closing sale price is reported, the average of the bid and ask prices or, if more than one in either case, the average of the average bid and the average ask prices) on that date as reported by The Nasdaq Global Select Market or, if such Capital Stock is not listed on The Nasdaq Global Select Market, then on the principal U.S. national or regional securities exchange on which such Capital Stock is then listed. If such Capital Stock is not listed on either The Nasdaq Global Select Market or on any U.S. national or regional securities exchange on the relevant date, the Closing Price will be the last quoted bid price for the Company’s Common Stock in the over-the-counter market on the relevant date as reported by the OTC Markets Group Inc. or similar organization. In the event that no such quotation is available for any day, the Board of Directors shall be entitled to determine in good faith the current market price on the basis of such quotations as it considers appropriate.

“**Commission**” means the Securities and Exchange Commission, as from time to time constituted, created under the Securities Exchange Act of 1934, or if at any time after the execution and delivery of this Indenture such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties on such date.

“**Common Stock**” means any and all shares, interests, participations or other equivalents (however designated, whether voting or non-voting) of the Issuer’s common stock, par value \$0.0001 per share, whether now outstanding or issued after the date of the Indenture, including, without limitation, all series and classes of such common stock.

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

“**Currency Agreement**” means any foreign exchange contract, currency swap agreement, or other similar agreement or arrangement designed to protect against the fluctuation in currency values.

“**Default**” means any Event of Default as defined in Section 4.01 and any event that is, or after notice or passage of time or both would be, an Event of Default.

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

“**Determination Date**” has the meaning specified in Section 12.05.

“**Event of Default**” has the meaning specified in Section 4.01.

“**GAAP**” means generally accepted accounting principles in the United States of America as in effect as of the date of determination, including, without limitation, those 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 approved by a significant segment of the accounting profession. All ratios and computations contained in this Indenture shall be computed in conformity with GAAP applied on a consistent basis.

“**Guarantee**” means any obligation, contingent or otherwise, of any Person directly or indirectly guaranteeing any Indebtedness or other obligation of any other Person and, without limiting the generality of the foregoing, any obligation, direct or indirect, contingent or otherwise, of such Person:

(i) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other obligation of such other Person (whether arising by virtue of partnership arrangements, or by agreement to keep-well, to purchase assets, goods, securities, or services, to take-or-pay, or to maintain financial statement conditions or otherwise); or

(ii) entered into for purposes of assuring in any other manner the obligee of such Indebtedness or other obligation of the payment thereof or to protect such obligee against loss in respect thereof (in whole or in part);

*provided*, that the term “**Guarantee**” shall not include endorsements for collection or deposit in the ordinary course of business. The term “**Guarantee**” used as a verb has a corresponding meaning.

“**Holder**”, “**Securityholder**” or other similar terms mean the registered holder of any Security.

“**Indebtedness**” means, with respect to any Person at any date of determination (without duplication):

(i) all indebtedness of such Person for borrowed money;

(ii) all obligations of such Person evidenced by bonds, debentures, notes, or other similar instruments, in each case, for value received or settlement of claims;

(iii) all obligations of such Person in respect of letters of credit or other similar instruments (including reimbursement obligations with respect thereto);

(iv) all obligations of such Person to pay the deferred and unpaid purchase price of property or services (but excluding trade accounts payable or accrued liabilities arising in the ordinary course of business);

(v) all obligations of such Person as lessee under Capitalized Leases;

(vi) all Indebtedness of other Persons secured by a Lien on any asset of such Person, whether or not such Indebtedness is assumed by such Person; *provided* that the amount of such Indebtedness shall be the lesser of:

(1) the fair market value of such asset at such date of determination; and

(2) amount of such Indebtedness;

(vii) all Indebtedness of other Persons to the extent Guaranteed by such Person; and

(viii) to the extent not otherwise included in this definition, obligations under Currency Agreements and Interest Rate Agreements.

Notwithstanding the foregoing, in no event shall the term “Indebtedness” be deemed to include letters of credit or bonds that secure performance or surety bonds or similar instruments that are issued in the ordinary course of business.

The amount of Indebtedness of any Person at any date shall be the outstanding balance at such date of all unconditional obligations as described above and, with respect to contingent obligations, the maximum liability upon the occurrence of the contingency giving rise to the obligation; *provided* that:

(x) the amount outstanding at any time of any Indebtedness issued with original issue discount is the face amount of such Indebtedness less the remaining unamortized portion of the original issue discount of such Indebtedness at such time as determined in conformity with GAAP; and

(y) Indebtedness shall not include any liability for federal, state, local, or other taxes.

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

“**Interest**” means, when used with respect to non-interest bearing Securities, interest payable after maturity. “**Interest Rate Agreement**” means any obligation of any Person pursuant to any interest rate swap, cap, collar or similar arrangement providing protection against fluctuations in interest rates. For purposes of the Indenture, the amount of such obligation shall be the amount determined in respect thereof as of the end of the then most recently ended fiscal quarter of such Person, based on the assumption that such obligation had terminated at the end of such fiscal quarter, and in making such determination, if any agreement relating to such obligation provides for the netting of amounts payable by and to such Person thereunder or if any such agreement provides for the simultaneous payment of amounts by and to such Person, then in each such case, the amount of such obligation shall be the net amount so determined, plus any premium due upon default by such Person.

“**Issuer**” means the Person identified as “**Issuer**” in the first paragraph hereof and, subject to Article 8, its successors and assigns.

“**Lien**” means, with respect to any asset, any mortgage, lien, pledge, charge, security interest or encumbrance of any kind, or any other type of preferential arrangement that has the practical effect of creating a security interest, in respect of such asset. For the purposes of this Indenture, the Issuer shall be deemed to own subject to a Lien any asset that it has acquired or holds subject to the interest of a vendor or lessor under any conditional sale agreement, capital lease or other title retention agreement relating to such asset.

“**Officers’ Certificate**” means a certificate signed by the chairman of the Issuer’s Board of Directors, any vice president, and by its treasurer, any assistant treasurer, its secretary or any assistant secretary of the Issuer, and delivered to the Trustee. Each such certificate shall comply with Section 314 of the Trust Indenture Act of 1939 and include the statements provided for in Section 10.05.

“**Opinion of Counsel**” means an opinion in writing signed by legal counsel who may be an employee of or counsel to the Issuer and who shall be satisfactory to the Trustee. Each such opinion shall comply with Section 314 of the Trust Indenture Act of 1939 and include the statements provided for in Section 10.05, if and to the extent required hereby.

“**Original Issue Date**” of any Security (or portion thereof) means the earlier of (i) the date of such Security or (ii) the date of any Security (or portion thereof) for which such Security was issued (directly or indirectly) on registration of transfer, exchange or substitution.

“**Original Issue Discount Security**” means any Security that provides for an amount less than the Principal amount thereof to be due and payable upon a declaration of acceleration of the maturity thereof pursuant to Section 4.01.

“**Outstanding**”, when used with reference to Securities, shall, subject to the provisions of Section 6.04, mean, as of any particular time, all Securities authenticated and delivered by the Trustee under this Indenture, except:

(i) Securities theretofore canceled by the Trustee or delivered to the Trustee for cancellation;

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

(iii) Securities in substitution for which other Securities shall have been authenticated and delivered, or which shall have been paid, pursuant to the terms of Section 2.09 (except with respect to any such Security as to which proof satisfactory to the Trustee is presented that such Security is held by a person in whose hands such Security is a legal, valid and binding obligation of the Issuer).

In determining whether the Holders of the requisite Principal amount of Outstanding Securities of any or all series have given any request, demand, authorization, direction, notice, consent or waiver hereunder, the Principal amount of an Original Issue Discount Security that shall be deemed to be Outstanding for such purposes shall be the amount of the Principal thereof that would be due and payable as of the date of such determination upon a declaration of acceleration of the maturity thereof pursuant to Section 4.01.

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

“**Preferred Stock**” means any and all shares, interests, participations or other equivalents (however designated, whether voting or non-voting) of the Issuer’s preferred stock, par value \$0.0001 per share, whether now outstanding or issued after the date of the Indenture, including, without limitation, all series and classes of such preferred stock.

“**Principal**” means, with respect to the Securities or any Security or any portion thereof, the principal amount of such Securities, Security or portion thereof, and shall be deemed to include “and premium, if any”.

“**record date**” as used with respect to any interest payment date (except a date for payment of defaulted interest), has the meaning specified in Section 2.07.

“**Registered Global Security**” means a Security evidencing all or a part of a series of Registered Securities, issued to the Depository for such series in accordance with Section 2.04, and bearing the legend prescribed in Section 2.04.

“**Registered Security**” means any Security registered on the register maintained by the Issuer pursuant to Section 2.08.

“**Responsible Officer**” when used with respect to the Trustee means any officer within the corporate trust department of the Trustee, including any vice president, assistant vice president, assistant secretary, assistant treasurer, trust officer or any other officer of the Trustee who customarily performs functions similar to those performed by the Persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of such person’s knowledge of and familiarity with the particular subject and who shall have direct responsibility for the administration of this Indenture.

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

“**Senior Indebtedness**” of the Issuer means (a) all Indebtedness of the Issuer, whether currently outstanding or hereafter issued, unless, by the terms of the instrument creating or evidencing such Indebtedness, it is provided that such Indebtedness is not superior in right of payment to the Securities, and (b) any modifications, refunding, deferrals, renewals or extensions of any such Indebtedness or securities, notes or other evidence of Indebtedness issued in exchange for such Indebtedness; provided that in no event shall “Senior Indebtedness” include (i) Indebtedness of the Issuer owed or owing to any Subsidiary of the Issuer or any officer, director or employee of the Issuer or any Subsidiary of the Issuer, (ii) Indebtedness to trade creditors or (iii) any liability for taxes owned or owing by the Issuer.

“**Subsidiary**” means, with respect to any Person, any corporation, association or other business entity of which more than 50% of all votes represented by all classes of outstanding Voting Stock is owned, directly or indirectly, by such Person and one or more other Subsidiaries of such Person.

“**Trustee**” means the Person identified as “**Trustee**” in the first paragraph hereof and, subject to the provisions of Article 5, shall also include any successor trustee.

“**Trust Indenture Act of 1939**” (except as otherwise provided in Section 7.01 and Section 7.02) means the Trust Indenture Act of 1939 as in force at the date as of which this Indenture was originally executed.

“**UCC**” means the Uniform Commercial Code, as in effect in each applicable jurisdiction. “**Unregistered Security**” means any Security other than a Registered Security.

“**U.S. Government Obligations**” means securities that are (i) direct obligations of the United States of America for the payment of which its full faith and credit is pledged or (ii) obligations of an agency of instrumentality of the United States of America the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such U.S. Government Obligation or a specific payment of interest on or principal of any such U.S. Government Obligation held by such custodian for the account of the holder of a depository receipt; 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 or the specific payment of interest on or principal of the U.S. Government Obligation evidenced by such depository receipt.

“**Voting Stock**” means, with respect to any Person, capital stock of any class or kind ordinarily having the power to vote for the election of directors, managers or other voting members of the governing body of such Person.

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

“**Wholly-Owned**” is defined to mean, with respect to any Subsidiary of any Person, such Subsidiary if all of the outstanding common stock or other similar equity ownership interests (but not including preferred stock) in such Subsidiary (other than any director’s qualifying shares or investments by foreign nationals mandated by applicable law) is owned directly or indirectly by such Person.

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

## ARTICLE 2 SECURITIES

Section 2.01 *Forms Generally*. The Securities of each series shall be substantially in such form (not inconsistent with this Indenture) as shall be established by or pursuant to a resolution of the Board of Directors or in one or more indentures supplemental hereto, in each case with such appropriate insertions, omissions, substitutions and other variations as are required or permitted by this Indenture and may have imprinted or otherwise reproduced thereon such legend or legends, not inconsistent with the provisions of this Indenture, as may be required to comply with any law or with any rules or regulations pursuant thereto, or with any rules of any securities exchange or to conform to general usage, all as may be determined by the officers executing such Securities, as evidenced by their execution of the Securities. The Issuer shall furnish any such legends to the Trustee in writing.

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

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

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

•,  
as Trustee

By: \_\_\_\_\_  
Authorized Signatory:

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

The Securities may be issued in one or more series. There shall be established in or pursuant to a resolution of the Board of Directors and set forth in an Officers’ Certificate, or established in one or more indentures supplemental hereto, prior to the issuance of Securities of any series:

- (a) the title of the Securities of the series (which shall distinguish the Securities of the series from all other Securities);
- (b) any limit upon the aggregate Principal amount of the Securities of the series that may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the series pursuant to Section 2.08, Section 2.09, Section 2.11 or Section 12.03);
- (c) the date or dates on which the Principal of the Securities of the series is payable;
- (d) the rate or rates at which the Securities of the series shall bear interest, if any, or the method by which such rate shall be determined, the date or dates from which such interest shall accrue, the interest payment dates on which such interest shall be payable and the record dates for the determination of Holders to whom interest is payable;
- (e) the place or places where the Principal of and any interest on Securities of the series shall be payable (if other than as provided in Section 3.02);
- (f) the price or prices at which, the period or periods within which and the terms and conditions upon which Securities of the series may be redeemed, in whole or in part, at the option of the Issuer;
- (g) the obligation, if any, of the Issuer to redeem, purchase or repay Securities of the series at the option of a Holder thereof and the price or prices at which, the period or periods within which and the terms and conditions upon which Securities of the series shall be redeemed, purchased or repaid, in whole or in part, pursuant to such obligation;
- (h) the obligation, if any, of the Issuer to permit the conversion of the Securities of such series into Capital Stock, and the terms and conditions upon which such conversion shall be effected (including, without limitation, the initial conversion price or rate, the conversion period and any other provision in addition to or in lieu of those set forth in this Indenture relative to such obligation);

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

(j) if other than the Principal amount thereof, the portion of the Principal amount of Securities of the series which shall be payable upon declaration of acceleration of the maturity thereof pursuant to Section 4.01 or provable in bankruptcy pursuant to Section 4.02;

(k) if the Securities of the series are issuable in whole or in part as one or more Registered Global Securities, the identity of the Depository for such Registered Global Security or Securities;

(l) any other terms of the series (which terms shall not be inconsistent with the provisions of this Indenture);

(m) any trustees, authenticating or paying agents, transfer agents or registrar or any other agents with respect to the Securities of such series; and

(n) the extent to which payments on the Securities will be subordinated to the payment of Senior Indebtedness of the Issuer.

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

Section 2.04 *Authentication and Delivery of Securities*. At any time and from time to time after the execution and delivery of this Indenture, the Issuer may deliver Securities of any series executed by the Issuer to the Trustee for authentication, and the Trustee shall thereupon authenticate and deliver such Securities to or upon the written order of the Issuer, such order to be signed by both (a) the chairman of its Board of Directors, any vice president and by its treasurer, any assistant treasurer, its secretary or any assistant secretary, without any further action by the Issuer. In authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities the Trustee shall receive, and (subject to Section 5.01) shall be fully protected in relying upon:

(a) a certified copy of any resolution or resolutions of the Board of Directors authorizing the action taken pursuant to the resolution or resolutions delivered under clause (b) below;

(b) a copy of any resolution or resolutions of the Board of Directors relating to such series, in each case certified by the secretary or an assistant secretary of the Issuer;

(c) an executed supplemental indenture, if any, and the documentation required to be delivered pursuant to Section 7.04;

(d) an Officers' Certificate setting forth the form and terms of the Securities as required pursuant to Section 2.01 and Section 2.03, respectively and prepared in accordance with Section 10.05;

(e) an Opinion of Counsel, prepared in accordance with Section 10.05, to the effect:

(i) that the form or forms and terms of such Securities have been established by or pursuant to a resolution of the Board of Directors or by a supplemental indenture as permitted by Section 2.01 and Section 2.03 in conformity with the provisions of this Indenture; and

(ii) that such Securities, when authenticated and delivered by the Trustee and issued by the Issuer in the manner and subject to any conditions specified in such Opinion of Counsel, will constitute valid and binding obligations of the Issuer enforceable against the Issuer in accordance with their terms, except to the extent that enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or similar laws now or hereafter in effect relating to creditors' rights generally, and general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law).

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

If the Issuer shall establish pursuant to Section 2.03 that the Securities of a series or a portion thereof are to be issued in the form of one or more Registered Global Securities, then the Issuer shall execute (in accordance with Section 2.05) and the Trustee shall authenticate and make available for delivery one or more Registered Global Securities that (i) shall represent and shall be denominated in an amount equal to the aggregate Principal amount of all of the Securities of such series issued in such form and not yet canceled, (ii) shall be registered in the name of the Depository for such Registered Global Security or Securities or the nominee of such Depository, (iii) shall be delivered by the Trustee to such Depository or its custodian or pursuant to such Depository's instructions and (iv) shall bear a legend substantially to the following effect: "Unless and until it is exchanged in whole or in part for Securities in definitive registered form, this Security may not be transferred except as a whole by the Depository to a nominee of the Depository or by a nominee of the Depository to the Depository or another nominee of the Depository or by the Depository or any such nominee to a successor Depository or a nominee of such successor Depository."

Section 2.05 *Execution of Securities*. The Securities shall be signed on behalf of the Issuer by the chairman of its Board of Directors, any vice president, its treasurer or any assistant treasurer, under its corporate seal and attested by its secretary or any assistant secretary. Such signatures may be the manual or facsimile signatures of the present or any future such officers. The seal of the Issuer may be in the form of a facsimile thereof and may be impressed, affixed, imprinted or otherwise reproduced on the Securities. Typographical and other minor errors or defects in any such reproduction of the seal or any such signature shall not affect the validity or enforceability of any Security that has been duly authenticated and delivered by the Trustee.

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

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

Section 2.07 *Denomination and Date of Securities; Payments of Interest*. The Securities shall be issuable as registered securities without coupons and in denominations as shall be specified as contemplated by Section 2.03. In the absence of any such specification with respect to the Securities of any series, the Securities of such series shall be issuable in denominations of \$1,000 and any multiple thereof. The Securities shall be numbered, lettered, or otherwise distinguished in such manner or in accordance with such plan as the officers of the Issuer executing the same may determine as evidenced by the execution and authentication thereof.

Each Security shall be dated the date of its authentication, shall bear interest, if any, from the date and shall be payable on the dates, in each case, which shall be specified as contemplated by Section 2.03.

The person in whose name any Security of any series is registered at the close of business on any record date applicable to a particular series with respect to any interest payment date for such series shall be entitled to receive the interest, if any, payable on such interest payment date notwithstanding any transfer or exchange of such Security subsequent to the record date and prior to such interest payment date, except if and to the extent the Issuer shall default in the payment of the interest due on such interest payment date for such series, in which case such defaulted interest shall be paid to the persons in whose names Outstanding Securities for such series are registered at the close of business on a subsequent record date (which shall be not less than five Business Days prior to the date of payment of such defaulted interest) established by notice given by mail by or on behalf of the Issuer to the Holders of Securities not less than 15 days preceding such subsequent record date. The term "**record date**" as used with respect to any interest payment date (except a date for payment of defaulted interest) shall mean the date specified as such in the terms of the Securities of any particular series, or, if no such date is so specified, if such interest payment date is the first day of a calendar month, the fifteenth day of the next preceding calendar month or, if such interest payment date is the fifteenth day of a calendar month, the first day of such calendar month, whether or not such record date is a Business Day.

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

At the option of the Holder thereof, Registered Securities of any series (other than a Registered Global Security, except as set forth below) may be exchanged for a Registered Security or Registered Securities of such series and tenor having authorized denominations and an equal aggregate Principal amount, upon surrender of such Registered Securities to be exchanged at the agency of the Issuer that shall be maintained for such purpose in accordance with Section 3.02 and upon payment, if the Issuer shall so require, of the charges hereinafter provided. If the Securities of any series are issued in both registered and unregistered form, except as otherwise established pursuant to Section 2.03, at the option of the Holder thereof, Unregistered Securities of any series may be exchanged for Registered Securities of such series and tenor having authorized denominations and an equal aggregate Principal amount, upon surrender of such Unregistered Securities to be exchanged at the agency of the Issuer that shall be maintained for such purpose in accordance with Section 3.02 and upon payment, if the Issuer shall so require, of the charges hereinafter provided. At the option of the Holder thereof, if Unregistered Securities of any series, maturity date, interest rate and Original Issue Date are issued in more than one authorized denomination, except as otherwise established pursuant to Section 2.03, such Unregistered Securities may be exchanged for Unregistered Securities of such series and tenor having authorized denominations and an equal aggregate Principal amount, upon surrender of such Unregistered Securities to be exchanged at the agency of the Issuer that shall be maintained for such purpose in accordance with Section 3.02 and upon payment, if the Issuer shall so require, of the charges hereinafter provided. Registered Securities of any series may not be exchanged for Unregistered Securities of such series. Whenever any Securities are so surrendered for exchange, the Issuer shall execute, and the Trustee shall authenticate and make available for delivery, the Securities which the Holder making the exchange is entitled to receive.

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

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

Notwithstanding any other provision of this Section 2.08, unless and until it is exchanged in whole or in part for Securities in definitive registered form, a Registered Global Security representing all or a portion of the Securities of a series may not be transferred except as a whole by the Depository for such series to a nominee of such Depository or by a nominee of such Depository to such Depository or another nominee of such Depository or by such Depository or any such nominee to a successor Depository for such series or a nominee of such successor Depository.

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

The Issuer may at any time and in its sole discretion determine that any Registered Global Securities of any series shall no longer be maintained in global form. In such event, or in the event that there shall have occurred and be continuing an Event of Default with respect to a series of Securities, the Issuer will, upon the request of any Holder, execute, and the Trustee, upon receipt of the Issuer's order for the authentication and delivery of definitive Registered Securities of such series and tenor, will authenticate and make available for delivery, Registered Securities of such series and tenor in any authorized denominations, in an aggregate Principal amount equal to the Principal amount of such Registered Global Securities, in exchange for such Registered Global Securities.

Any time the Registered Securities of any series are not in the form of Registered Global Securities pursuant to the preceding two paragraphs, the Issuer agrees to supply the Trustee with a reasonable supply of certificated Registered Securities without the legend required by Section 2.04 and the Trustee agrees to hold such Registered Securities in safekeeping until authenticated and delivered pursuant to the terms of this Indenture.

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

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

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

Registered Securities issued in exchange for a Registered Global Security pursuant to this Section 2.08 shall be registered in such names and in such authorized denominations as the Depository for such Registered Global Security, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee or an agent of the Issuer or the Trustee. The Trustee or such agent shall deliver such Securities to or as directed by the Persons in whose names such Securities are so registered.

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

Notwithstanding anything herein or in the forms or terms of any Securities to the contrary, none of the Issuer, the Trustee or any agent of the Issuer or the Trustee shall be required to exchange any Unregistered Security for a Registered Security if such exchange would result in adverse Federal income tax consequences to the Issuer (such as, for example, the inability of the Issuer to deduct from its income, as computed for Federal income tax purposes, the interest payable on the Unregistered Securities) under then applicable United States Federal income tax laws. The Trustee and any such agent shall be entitled to rely on an Officers' Certificate or an Opinion of Counsel in determining such result.

Neither the Registrar nor the Issuer shall be required (i) to issue, authenticate, register the transfer of or exchange Securities of any series for a period of 15 days before the mailing of a notice of redemption of such Securities to be redeemed or (ii) to register the transfer of or exchange any Security selected for redemption in whole or in part.

*Section 2.09 Mutilated, Defaced, Destroyed, Lost and Stolen Securities.* In case any temporary or definitive Security shall become mutilated or defaced and shall be surrendered to the Trustee, the Issuer shall execute, and the Trustee shall authenticate and deliver, a new Security of the same series, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated or defaced Security. If the Holder of any Security claims that the Security has been lost, destroyed or wrongfully taken, the Issuer shall execute, and the Trustee shall authenticate and deliver, a new Security of the same series, bearing a number not contemporaneously outstanding, in exchange and substitution for the lost, destroyed or wrongfully taken Security, if the applicant so requests before the Issuer has notice that the Security has been acquired by a protected purchaser, and the applicant furnishes to the Issuer and to the Trustee and any agent of the Issuer or the Trustee such security or indemnity as may be required by them to indemnify and defend and to save each of them harmless and the applicant satisfies other reasonable requirements imposed by the Issuer.

Upon the issuance of any substitute Security, the Issuer may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee and its counsel) connected therewith. In case any Security which has matured or is about to mature or has been called for redemption in full shall become mutilated or defaced or be destroyed, lost or stolen, the Issuer may instead of issuing a substitute Security, pay or authorize the payment of the same (without surrender thereof except in the case of a mutilated or defaced Security), if the applicant for such payment shall furnish to the Issuer and to the Trustee and any agent of the Issuer or the Trustee such security or taking, the applicant shall also furnish to the Issuer and the Trustee and any agent of the Issuer or the Trustee evidence to their satisfaction of the destruction, loss or wrongful taking of such Security and of the ownership thereof.

Every substitute Security of any series issued pursuant to the provisions of this section by virtue of the fact that any such Security is destroyed, lost or stolen shall constitute an additional contractual obligation of the Issuer, whether or not the destroyed, lost or wrongfully taken Security shall be at any time enforceable by anyone and shall be entitled to all the benefits of (but shall be subject to all the limitations of rights set forth in) this Indenture equally and proportionately with any and all other Securities of such series duly authenticated and delivered hereunder. All Securities shall be held and owned upon the express condition that, to the extent permitted by law, the foregoing provisions are exclusive with respect to the replacement or payment of mutilated, defaced or destroyed, lost or wrongfully taken Securities and shall preclude any and all other rights or remedies.

*Section 2.10 Cancellation of Securities; Destruction Thereof.* All Securities surrendered for payment, redemption, repurchase, conversion, registration of transfer or exchange, if surrendered to the Issuer or any agent of the Issuer or the Trustee, shall be delivered to the Trustee for cancellation or, if surrendered to the Trustee, shall be canceled by it; and no Securities shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Indenture. The Trustee shall dispose of canceled Securities held by it in accordance with the record retention policies of the Trustee in effect from time to time and, if such canceled certificates are destroyed, shall deliver a certificate of destruction to the Issuer. If the Issuer shall acquire any of the Securities, such acquisition shall not operate as a redemption or satisfaction of the indebtedness represented by such Securities unless and until the same are delivered to the Trustee for cancellation.

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

Section 2.12 *Computation of Interest*. Except as otherwise specified in the Securities of a series, interest shall be computed on the basis of a 360-day year of twelve 30-day months.

Section 2.13 *CUSIP Numbers*. The Issuer 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 identification numbers printed on the Securities, and any such redemption shall not be affected by any defect in or omission of such numbers. The Issuer will notify the Trustee of any change in the "CUSIP" numbers.

### **ARTICLE 3 COVENANTS OF THE ISSUER AND THE TRUSTEE**

Section 3.01 *Payment of Principal and Interest*. The Issuer covenants and agrees for the benefit of each series of Securities that it will duly and punctually pay or cause to be paid the Principal of, and interest on, each of the Securities of such series at the place or places, at the respective times and in the manner provided in such Securities. Each installment of interest on the Securities of any series may be paid by mailing checks for such interest payable to or upon the written order of the Holders of Securities entitled thereto as they shall appear on the registry books of the Issuer.

Notwithstanding any provisions of this Indenture and the Securities of any series to the contrary, if the Issuer and a Holder of any Registered Security so agree or if expressly provided pursuant to Section 2.03, payments of interest on, and any portion of the Principal of, such Holder's Registered Security shall be made by the paying agent, upon receipt from the Issuer of immediately available funds by 11:00 a.m., New York City time (or such other time as may be agreed to between the Issuer and the paying agent) or the Issuer, directly to the Holder of such Security (by wire transfer of Federal funds or immediately available funds or otherwise) if the Holder has delivered written instructions to the Trustee 15 days prior to such payment date requesting that such payment will be so made and designating the bank account to which such payments shall be so made and, in the case of payments of Principal, surrenders the same to the Trustee. The Trustee shall be entitled to rely on the last instruction delivered by the Holder pursuant to this Section 3.01 unless a new instruction is delivered 15 days prior to a payment date. The Issuer will indemnify and hold each of the Trustee and any paying agent harmless against any loss, liability or expense (including attorneys' fees and expenses) resulting from any act or omission to act on the part of the Issuer or any such Holder in connection with any such agreement or from making any payment in accordance with any such agreement.

Section 3.02 *Offices for Payments, etc.* So long as any of the Securities remain outstanding, the Issuer will maintain in the Borough of Manhattan, The City of New York an office or agency (o) where the Securities may be presented for payment, (p) where the Securities may be presented for registration of transfer and for exchange as in this Indenture provided, (q) where notices and demands to or upon the Issuer in respect of the Securities or of this Indenture may be served and (r) for Securities of each series that is convertible, where such Securities may be presented for conversion. The Issuer will give to the Trustee written notice of the location of any such office or agency and of any change of location thereof. Unless otherwise specified in accordance with Section 2.03, the Issuer hereby initially designates the Corporate Trust Office of Trustee as the office to be maintained by it for each such purpose. In case the Issuer shall fail to so designate or maintain any such office or agency or shall fail to give such notice of the location or of any change in the location thereof, presentations and demands may be made and notices may be served at the Corporate Trust Office.

Section 3.03 *Paying Agents.* Whenever the Issuer shall appoint a paying agent other than the Trustee with respect to the Securities of any series, it will cause such paying agent to execute and deliver to the Trustee an instrument in which such agent shall agree with the Trustee, subject to the provisions of this Section:

(a) that it will hold all sums received by it as such agent for the payment of the Principal of or interest on the Securities of such series (whether such sums have been paid to it by the Issuer or by any other obligor on the Securities of such series) in trust for the benefit of the Holders of the Securities of such series or of the Trustee;

(b) that it will give the Trustee notice of any failure by the Issuer (or by any other obligor on the Securities of such series) to make any payment of the Principal of or interest on the Securities of such series when the same shall be due and payable; and during the continuance of the failure referred to in clause Section 3.03(b) above.

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

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

Whenever the Issuer shall have one or more paying agents for any series of Securities, it will, on or before each due date of the Principal of or interest on any Securities of such series, deposit with the paying agent or agents for the Securities of such series a sum, by 11:00 a.m. New York City time in immediately available funds on the payment date, sufficient to pay the Principal or interest so becoming due with respect to the Securities of such series, and (unless such paying agent is the Trustee) the Issuer will promptly notify the Trustee in writing of any failure so to act.

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

Anything in this Section 3.03 to the contrary notwithstanding, the agreement to hold sums in trust as provided in this Section 3.03 is subject to the provisions of Section 9.05.

Section 3.04 *Certificate of the Issuer.* Within 120 days after the close of the fiscal year ended ●, and within 120 days after the close of each fiscal year thereafter, the Issuer will furnish to the Trustee a brief certificate (which need not comply with Section 10.05) from the principal executive, financial or accounting officer of the Issuer as to his or her knowledge of the Issuer's compliance with all conditions and covenants under the Indenture (such compliance to be determined without regard to any period of grace or requirement of notice provided under the Indenture).

At the time such certificate is filed, the Issuer will also file with the Trustee a letter or statement of the independent accountants who shall have certified the financial statements of the Issuer for its preceding fiscal year to the effect that, in making the examination necessary for certification of such financial statements, they have obtained no knowledge of any default by the Issuer in the performance or fulfillment of any covenant, agreement or condition contained in this Indenture, which default remains uncured at the date of such letter or statement, or, if they shall have obtained knowledge of any such uncured default, specifying in such letter or statement such default or defaults and the nature and status thereof, it being understood that such accountants shall not be liable directly or indirectly for failure to obtain knowledge of any such default or defaults, and that nothing contained in this Section 3.04 shall be construed to require such accountants to make any investigation beyond the scope required in connection with such examination.

Section 3.05 *List of Securityholders*. If and so long as the Trustee shall not be the Security registrar for the Securities of any series, the Issuer will furnish or cause to be furnished to the Trustee a list in such form as the Trustee may reasonably require of the names and addresses of the Holders of the Securities of such series pursuant to Section 312 of the Trust Indenture Act of 1939 (a) semi-annually not more than 10 days after each record date for the payment of interest on such Securities, as hereinabove specified, as of such record date and on dates to be determined pursuant to Section 2.03 for non-interest bearing Securities in each year and (b) at such other times as the Trustee may request in writing, within 30 days after receipt by the Issuer of any such request as of a date not more than 10 days prior to the time such information is furnished.

Section 3.06 *Reports by the Issuer*. The Issuer covenants to:

(a) file, whether or not required to do so under applicable law, with the Trustee, within 15 days after the Issuer files the same with the Commission:

(i) copies of the annual reports and of the information, documents, and other reports which the Issuer files with the Commission pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934; and

(ii) such additional information, documents and reports with respect to compliance by the Issuer with the conditions and covenants provided for in this Indenture as the Issuer may from time to time file with the Commission; and

(b) transmit to the Securityholders, in the manner and to the extent provided in Section 10.04, such summaries of any information, documents and reports required to be filed with the Trustee pursuant to the provisions of subdivision (a) of this Section 3.06 as may be required by the rules and regulations of the Commission.

Delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee's receipt of such shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Issuer's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officers' Certificates).

Section 3.07 *Corporate Existence*. So long as any of the Securities remain unpaid, the Issuer will at all times (except as otherwise provided or permitted elsewhere in this Indenture) do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence.

Section 3.08 *Restrictions on Mergers, Sales and Consolidations*. So long as any of the Securities remain unpaid, the Issuer will not consolidate or merge with or sell, convey or lease all or substantially all of its property to any other corporation except as permitted in Article 8 hereof.

Section 3.09 *Further Assurances*. From time to time whenever requested by the Trustee, the Issuer will execute and deliver such further instruments and assurances and do such further acts as may be reasonably necessary or proper to carry out more effectually the purposes of this Indenture or to secure the rights and remedies hereunder of the Holders of the Securities of any series.

#### ARTICLE 4 REMEDIES OF THE TRUSTEE AND SECURITYHOLDERS ON EVENT OF DEFAULT

Section 4.01 *Event of Default Defined; Acceleration of Maturity; Waiver of Default*. "Event of Default" with respect to Securities of any series wherever used herein, means any one of the following events which shall have occurred and be continuing (whatever the reason for such Event of Default and whether it shall be voluntary or involuntary or be effected by operation of law or pursuant to any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body):

(a) default by the Issuer in the payment of any installment of interest upon any of the Securities of such series as and when the same shall become due and payable, and continuance of such default for a period of 30 days;

(b) default by the Issuer in the payment of all or any part of the Principal on any of the Securities of such series as and when the same shall become due and payable either at maturity, upon redemption, by declaration or otherwise, and continuance of such default for a period of five days;

(c) default by the Issuer in the performance, or breach by the Issuer, of any of its covenants or agreements in respect of the Securities of such series (other than a covenant or agreement in respect of the Securities of such series a default in whose performance or whose breach is elsewhere in this section specifically dealt with), and continuance of such default or breach for a period of 30 consecutive days after there has been given, by registered or certified mail, to the Issuer by the Trustee or to the Issuer and the Trustee by the Holders of at least 25% in Principal amount of the Outstanding Securities of all series affected thereby, 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;

(d) the entry by a court having jurisdiction in the premises of a decree or order for relief in respect of the Issuer in an involuntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or the appointment of a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or for any substantial part of the Issuer's property and assets or the ordering of the winding up or liquidation of the Issuer's affairs, and the continuance of any such decree or order unstayed and in effect for a period of 90 consecutive days;

(e) the commencement by the Issuer of a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or the consent by the Issuer to the entry of an order for relief in an involuntary case under any such law, or the consent by the Issuer to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or for any substantial part of the Issuer's property, or the making of any general assignment by the Issuer for the benefit of creditors; or

(f) any other Event of Default provided in the supplemental indenture or resolution of the Board of Directors under which such series of Securities is issued or in the form of Security for such series.

If an Event of Default described in clauses 4.01(a), 4.01(b), 4.01(c) or 4.01(f) occurs and is continuing, then, and in each and every such case, unless the Principal of all of the Securities of such series shall have already become due and payable, either the Trustee or the Holders of not less than 25% in aggregate Principal amount of the Securities of any affected series then Outstanding hereunder (each such series voting as a separate class) by notice in writing to the Issuer (and to the Trustee if given by Securityholders), may declare the entire Principal (or, if the Securities of such series are Original Issue Discount Securities, such portion of the Principal amount as may be specified in the terms of such series) of all Securities of such series and the interest accrued thereon, if any, to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable. If an Event of Default described in clauses Section 4.01(d) or Section 4.01(e) occurs and is continuing, then the Principal amount of all the Securities then Outstanding and interest accrued thereon, if any, shall be and become immediately due and payable, without any notice or other action by any Holder or the Trustee, to the full extent permitted by applicable law.

The foregoing provisions, however, are subject to the condition that if, at any time after the Principal (or, if the Securities are Original Issue Discount Securities, such portion of the Principal as may be specified in the terms thereof) of the Securities of any series (or of all the Securities, as the case may be) shall have been so declared due and payable, and before any judgment or decree for the payment of the monies due shall have been obtained or entered as hereinafter provided, the Issuer shall pay or shall deposit with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of such series (or of all the Securities, as the case may be) and the Principal of any and all Securities of such series (or of all the Securities, as the case may be) which shall have become due otherwise than by acceleration (with interest upon such Principal and, to the extent that payment of such interest is enforceable under applicable law, on overdue installments of interest, at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in the Securities of such series (or at the respective rates of interest or Yields to Maturity of all the Securities, as the case may be) to the date of such payment or deposit) and such amount as shall be sufficient to cover reasonable compensation to the Trustee, its agents, attorneys and counsel, and all other expenses and liabilities incurred, and all advances made, by the Trustee except as a result of negligence or bad faith, and if any and all Events of Default under the Indenture, other than the non-payment of the Principal of Securities which shall have become due by acceleration, shall have been cured, waived or otherwise remedied as provided herein, then and in every such case the Holders of a majority in aggregate Principal amount of all the then Outstanding Securities of all such series that have been accelerated, each such series voting as a separate class, by written notice to the Issuer and to the Trustee, may waive all defaults with respect to such series (or with respect to all the Securities, as the case may be) and rescind and annul such declaration and its consequences, but no such waiver or rescission and annulment shall extend to or shall affect any subsequent default or shall impair any right consequent thereon.

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

Section 4.02 *Collection of Indebtedness by Trustee; Trustee May Prove Debt.* The Issuer covenants that (h) in case default shall be made in the payment of any installment of interest on any of the Securities of any series when such interest shall have become due and payable, and such default shall have continued for a period of 30 days or (i) in case default shall be made in the payment of all or any part of the Principal of any of the Securities of any series when the same shall have become due and payable, whether upon maturity of the Securities of such series or upon any redemption or by declaration or otherwise, then in each case upon demand of the Trustee, the Issuer will pay to the Trustee for the benefit of the Holders of the Securities of such series (x) the whole amount that then shall have become due and payable on all Securities of such series for Principal or interest, as the case may be (with interest to the date of such payment upon the overdue Principal and, to the extent that payment of such interest is enforceable under applicable law, on overdue installments of interest at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in the Securities of such series) and (y) in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including reasonable compensation to the Trustee and each predecessor Trustee, their respective agents and counsel, and any expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor Trustee except as a result of its negligence or bad faith.

Until such demand is made by the Trustee, the Issuer may pay the Principal of and interest on the Securities of any series to the registered Holders, whether or not the Principal of and interest on the Securities of such series be overdue.

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

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

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

(b) unless prohibited by applicable law and regulations, to vote on behalf of the Holders of the Securities of any series in any election of a trustee or a standby trustee in arrangement, reorganization, liquidation or other bankruptcy or insolvency proceedings or person performing similar functions in comparable proceedings; and

(c) to collect and receive any monies or other property payable or deliverable on any such claims, and to distribute all amounts received with respect to the claims of the Securityholders and of the Trustee on their behalf; and any trustee, receiver, or liquidator, custodian or other similar official is hereby authorized by each of the Securityholders to make payments to the Trustee, and, in the event that the Trustee shall consent to the making of payments directly to the Securityholders, to pay to the Trustee such amounts as shall be sufficient to cover reasonable compensation to the Trustee, each predecessor Trustee and their respective agents, attorneys and counsel, and all other expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor Trustee except as a result of negligence or bad faith and all other amounts due to the Trustee or any predecessor Trustee pursuant to Section 5.06.

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

All rights of action and of asserting claims under this Indenture, or under any of the Securities, may be enforced by the Trustee without the possession of any of the Securities or the production thereof on any trial or other proceedings relative thereto, and any such action or proceedings instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment, subject to the payment of the expenses, disbursements and compensation of the Trustee, each predecessor Trustee and their respective agents and attorneys, shall be for the ratable benefit of the Holders of the Securities in respect of which such action was taken.

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

Section 4.03 *Application of Proceeds*. Any monies collected by the Trustee pursuant to this Article in respect of any series shall be applied in the following order at the date or dates fixed by the Trustee and, in case of the distribution of such monies on account of Principal or interest, upon presentation of the several Securities in respect of which monies have been collected and stamping (or otherwise noting) thereon the payment, or issuing Securities of such series in reduced Principal amounts in exchange for the presented Securities of like series if only partially paid, or upon surrender thereof if fully paid:

FIRST: To the payment of costs and expenses applicable to such series in respect of which monies have been collected, including reasonable compensation to the Trustee and each predecessor Trustee and their respective agents and attorneys and of all expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor Trustee except as a result of negligence or bad faith, and all other amounts due to the Trustee or any predecessor Trustee pursuant to Section 5.06;

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

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

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

Section 4.04 *Suits for Enforcement*. In case an Event of Default has occurred, has not been waived and is continuing, the Trustee may proceed to protect and enforce the rights vested in it by this Indenture, either at law or in equity or in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in this Indenture or in aid of the exercise of any power granted in this Indenture or to enforce any other legal or equitable right vested in the Trustee by this Indenture or by law.

Section 4.05 *Restoration of Rights on Abandonment of Proceedings*. In case the Trustee shall have proceeded to enforce any right under this Indenture and such proceedings shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Trustee, then and in every such case the Issuer and the Trustee shall be restored respectively to their former positions and rights hereunder, and all rights, remedies and powers of the Issuer, the Trustee and the Securityholders shall continue as though no such proceedings had been taken.

Section 4.06 *Limitations on Suits by Securityholder*. No Holder of any Security of any series shall have any right by virtue or by availing of any provision of this Indenture to institute any action or proceeding at law or in equity or in bankruptcy or otherwise upon or under or with respect to this Indenture, or for the appointment of a trustee, receiver, liquidator, custodian or other similar official or for any other remedy hereunder, unless such Holder previously shall have given to the Trustee written notice of an Event of Default and of the continuance thereof, as hereinbefore provided, and unless also the Holders of not less than 25% in aggregate Principal amount of the Securities of such series then outstanding shall have made written request upon the Trustee to institute such action or proceedings in respect of such Event of Default in its own name as trustee hereunder and shall have offered to the Trustee indemnity satisfactory to the Trustee against the costs, expenses and liabilities to be incurred therein or thereby and the Trustee for 60 days after its receipt of such notice, request and offer of indemnity shall have failed to institute any such action or proceeding and no direction inconsistent with such written request shall have been given to the Trustee pursuant to Section 4.09; it being understood and intended, and being expressly covenanted by the Holder of every Security with every other Holder and the Trustee, that no one or more Holders of Securities of any series shall have any right in any manner whatever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of any other such Holder of Securities, or to obtain or seek to obtain priority over or preference to any other such Holder or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all Holders of Securities of the applicable series. For the protection and enforcement of the provisions of this Section, each and every Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

Section 4.07 *Unconditional Right of Securityholders to Institute Certain Suits*. Notwithstanding any other provision in this Indenture and any provision of any Security, the right of any Holder of any Security to receive payment of the Principal of or interest on such Security on or after the respective due dates expressed in such Security, or to institute suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of such Holder.

Section 4.08 *Powers and Remedies Cumulative; Delay or Omission Not Waiver of Default*. Except as provided in Section 4.06, no right or remedy herein conferred upon or reserved to the Trustee or to the Securityholders is intended to be exclusive of any other right or remedy, and every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

No delay or omission of the Trustee or of any Securityholder to exercise any right or power accruing upon any Event of Default occurring and continuing as aforesaid shall impair any such right or power or shall be construed to be a waiver of any such Event of Default or an acquiescence therein; and, subject to Section 4.06, every power and remedy given by this Indenture or by law to the Trustee or to the Securityholders may be exercised from time to time, and as often as shall be deemed expedient, by the Trustee or by the Securityholders.

Section 4.09 *Control by Securityholders*. The Holders of a majority in aggregate Principal amount of the Securities of each series affected (with each series voting as a separate class) at the time outstanding shall have the right to direct the time, method, and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee with respect to the Securities of such series by this Indenture; provided that such direction shall not be otherwise than in accordance with law and the provisions of this Indenture and provided further that (subject to the provisions of Section 5.01) the Trustee shall have the right to decline to follow any such direction if the Trustee, being advised by counsel, shall determine that the action or proceeding so directed may not lawfully be taken or if the Trustee in good faith by its board of directors, the executive committee, or a trust committee of directors or Responsible Officers of the Trustee shall determine that the action or proceedings so directed would subject the Trustee to personal liability or if the Trustee in good faith shall so determine that the actions or forbearances specified in or pursuant to such direction would be unduly prejudicial to the interests of Holders of the Securities of all series so affected not joining in the giving of said direction.

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

Section 4.10 *Waiver of Past Defaults*. Prior to a declaration of the acceleration of the maturity of the Securities of any series as provided in Section 4.01, the Holders of a majority in aggregate Principal amount of the Securities of such series at the time Outstanding (each such series voting as a separate class) may on behalf of the Holders of all the Securities of such series waive an existing default or Event of Default, except a default in the payment of Principal of or interest on any Security as specified in clauses (a) or (b) of Section 4.01 or in respect of a covenant or provision hereof which cannot be modified or amended without the consent of each Holder affected as provided in Section 7.02. In the case of any such waiver, the Issuer, the Trustee and the Holders of the Securities of each series affected shall be restored to their former positions and rights hereunder, respectively.

Upon any such waiver, such default shall cease to exist and be deemed to have been cured and not to have occurred, and any Event of Default arising therefrom shall be deemed to have been cured, and not to have occurred for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other default or Event of Default or impair any right consequent thereon.

Section 4.11 *Trustee to Give Notice of Default, But May Withhold in Certain Circumstances*. The Trustee shall give to the Securityholders of any series, as the names and addresses of such Holders appear on the registry books, notice by mail of all defaults known to Responsible Officers of the Trustee which have occurred with respect to such series, such notice to be transmitted within 90 days after the occurrence thereof, unless such defaults shall have been cured before the giving of such notice (the term “default” or “defaults” for the purposes of this section being hereby defined to mean any event or condition which is, or with notice or lapse of time or both would become, an Event of Default); provided that, except in the case of default in the payment of the Principal of or interest on any of the Securities of such series, the Trustee shall be protected in withholding such notice if and so long as the board of directors, the executive committee, or a trust committee of directors or trustees and/or Responsible Officers of the Trustee in good faith determines that the withholding of such notice is in the interests of the Securityholders of such series.

Section 4.12 *Right of Court to Require Filing of Undertaking to Pay Costs*. All parties to this Indenture agree, and each Holder of any Security by his 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 and expenses, 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; *provided* that the provisions of this Section 4.12 shall not apply to (i) any suit instituted by the Trustee, (ii) any suit instituted by any Securityholder or group of Securityholders of any series holding in the aggregate more than 10% in aggregate Principal amount of the Securities of such series or (iii) any suit instituted by a Holder pursuant to Section 4.07.

## ARTICLE 5 CONCERNING THE TRUSTEE

Section 5.01 *Duties and Responsibilities of the Trustee*. With respect to the Holders of any series of Securities issued hereunder, the Trustee, prior to the occurrence of an Event of Default with respect to the Securities of a particular series and after the curing or waiving of all Events of Default which may have occurred with respect to such series, undertakes to perform such duties and only such duties as are specifically set forth in this Indenture. In case an Event of Default with respect to the Securities of a series has occurred (which has not been cured or waived) the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of such person’s own affairs.

(a) Prior to the occurrence of an Event of Default with respect to the Securities of any series and after the curing or waiving of all such Events of Default with respect to such series which may have occurred:

(i) the duties and obligations of the Trustee with respect to the Securities of any Series shall be determined solely by the express provisions of this Indenture, and the Trustee shall not be liable except for the performance of such duties and obligations as are specifically set forth in this Indenture, and no implied covenants or obligations shall be read into this Indenture against the Trustee; and

(ii) in the absence of bad faith on the part of the Trustee, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any statements, certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but in the case of any such statements, certificates or opinions which by any provision hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the same to determine whether or not they conform to the requirements of this Indenture.

(b) No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

(i) this subsection (b) shall not be construed to limit the effect of subsection (a) of this Section 5.01;

(ii) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer or Responsible Officers of the Trustee, unless it shall be proved that the Trustee was negligent in ascertaining the pertinent facts; and

(iii) the Trustee shall not be liable with respect to any action taken, suffered or omitted to be taken by it in good faith in accordance with the direction of the Holders 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.

None of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers, if there shall be reasonable ground for believing that the repayment of such funds or adequate indemnity against such liability is not reasonably assured to it.

The provisions of this Section 5.01 are in furtherance of and subject to Sections 315 and 316 of the Trust Indenture Act of 1939.

Whether or not therein expressly provided, every provision of this Indenture relating to the conduct of, affecting the liability of or affording protection to the Trustee shall be subject to the provisions of this Section 5.01.

Section 5.02 *Certain Rights of the Trustee*. In furtherance of and subject to the Trust Indenture Act of 1939, and subject to Section 5.01:

(a) In the absence of bad faith on its part, the Trustee may conclusively rely and shall be protected in acting or refraining from acting upon any resolution, Officers' Certificate or any other certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, coupon, security or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(b) any request, direction, order or demand of the Issuer mentioned herein shall be sufficiently evidenced by an Officers' Certificate (unless other evidence in respect thereof be herein specifically prescribed); and any resolution of the Board of Directors may be evidenced to the Trustee by a copy thereof certified by the secretary or an assistant secretary of the Issuer;

(c) the Trustee may consult with counsel of its selection and any advice or Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted to be taken by it hereunder in good faith and in accordance with such advice or Opinion of Counsel;

(d) the Trustee shall be under no obligation to exercise any of the trusts or powers vested in it by this Indenture at the request, order or direction of any of the Securityholders pursuant to the provisions of this Indenture, unless such Securityholders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities which might be incurred by it in connection with such request, order or direction;

(e) the Trustee shall not be liable for any action taken or omitted by it in good faith and believed by it to be authorized or within the discretion, rights or powers conferred upon it by this Indenture;

(f) prior to the occurrence of an Event of Default hereunder and after the curing or waiving of all Events of Default, the Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, appraisal, bond, debenture, note, coupon, security, or other paper or document unless requested in writing so to do by the Holders of not less than a majority in aggregate Principal amount of the Securities of all series affected then outstanding; provided that, if the payment within a reasonable time to the Trustee of the costs, expenses or liabilities likely to be incurred by it in the making of such investigation is, in the opinion of the Trustee, not reasonably assured to the Trustee by the security afforded to it by the terms of this Indenture, the Trustee may require indemnity satisfactory to it against such expenses or liabilities as a condition to proceeding, and the reasonable expenses of every such investigation shall be paid by the Issuer or, if paid by the Trustee or any predecessor trustee, shall be repaid by the Issuer upon demand;

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

(h) the Trustee shall not be liable for any action taken, suffered or omitted in good faith and believed by it to be authorized or within the discretion, rights or powers conferred upon it by this Indenture;

(i) 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 and this Indenture;

(j) 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; and

(k) the Trustee may request that the Issuer deliver an Officers' Certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture, which Officers' Certificate may be signed by any person authorized to sign an Officers' Certificate, including any person specified as so authorized in any such certificate previously delivered and not superseded.

Section 5.03 *Trustee Not Responsible for Recitals, Disposition of Securities or Application of Proceeds Thereof*. The recitals contained herein and in the Securities, except the Trustee's certificates of authentication, shall be taken as the statements of the Issuer, and the Trustee assumes no responsibility for the correctness of the same. The Trustee makes no representation as to the validity or sufficiency of this Indenture or the Securities. The Trustee shall not be accountable for the use or application by the Issuer of any of the Securities or of the proceeds thereof.

Section 5.04 *Trustee and Agents May Hold Securities; Collections, etc.* The Trustee or any agent of the Issuer or the Trustee, in its individual or any other capacity, may become the owner or pledgee of Securities with the same rights it would have if it were not the Trustee or such agent and may otherwise deal with the Issuer and receive, collect, hold and retain collections from the Issuer with the same rights it would have if it were not the Trustee or such agent.

Section 5.05 *Monies Held by Trustee*. All monies received by the Trustee in trust hereunder need not be segregated from other funds except to the extent required by mandatory provisions of law. Neither the Trustee nor any agent of the Issuer or the Trustee shall be under any liability for interest on any monies received by it hereunder.

Section 5.06 *Compensation and Indemnification of Trustee and Its Prior Claim*. The Issuer covenants and agrees to pay to the Trustee from time to time, and the Trustee shall be entitled to, such compensation as shall be agreed in writing from time to time by the Issuer and the Trustee (which shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust) and the Issuer covenants and agrees to pay or reimburse the Trustee and each predecessor Trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by or on behalf of it in accordance with any of the provisions of this Indenture (including the reasonable compensation and the expenses and disbursements of its counsel and of all agents and other persons not regularly in its employ) except to the extent any such expense, disbursement or advance may arise from its negligence or bad faith. The Issuer also covenants and agrees to indemnify the Trustee and each predecessor Trustee for, and to hold it harmless against, any loss, liability or expense arising out of or in connection with the acceptance or administration of this Indenture or the trusts hereunder and the performance of its duties hereunder, including the costs and expenses of defending itself against or investigating any claim of liability (whether asserted by the Issuer, a Holder or any other Person) in the premises, except to the extent such loss, liability or expense is due to the negligence or bad faith of the Trustee or such predecessor Trustee. The obligations of the Issuer under this section to compensate and indemnify the Trustee and each predecessor Trustee and to pay or reimburse the Trustee and each predecessor Trustee for expenses, disbursements and advances shall constitute additional indebtedness hereunder and shall survive the satisfaction and discharge of this Indenture or the resignation or removal of the Trustee. Such additional indebtedness shall be a senior claim and lien to that of the Securities upon all property and funds held or collected by the Trustee as such, except funds held in trust for the benefit of the Holders of particular Securities, and the Securities are hereby subordinated to such senior claim. The parties agree that if the Trustee renders services following an Event of Default under Section 4.01(d) or (e), compensation for such services is intended to constitute administrative expense under any bankruptcy law.

Section 5.07 *Right of Trustee to Rely on Officers' Certificate, etc.* Subject to Section 5.01 and Section 5.02, whenever in the administration of the trusts of this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering or omitting any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of negligence or bad faith on the part of the Trustee, be deemed to be conclusively proved and established by an Officers' Certificate delivered to the Trustee, and such certificate, in the absence of negligence or bad faith on the part of the Trustee, shall be full warrant to the Trustee for any action taken, suffered or omitted by it under the provisions of this Indenture upon the faith thereof.

Section 5.08 *Persons Eligible for Appointment as Trustee*. The Trustee for each series of Securities hereunder shall at all times be a corporation which is eligible in accordance with the provisions of Section 310(a) of the Trust Indenture Act of 1939 and which has (or which is a Wholly-Owned Subsidiary, directly or indirectly, of a bank holding company which has) a combined capital and surplus of \$50,000,000. If such corporation or holding company publishes reports of condition at least annually, pursuant to law or to the requirements of a Federal, State or District of Columbia supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation or holding company shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published.

Section 5.09 *Resignation and Removal; Appointment of Successor Trustee.* (a) The Trustee, or any trustee or trustees hereafter appointed, may at any time resign with respect to one or more or all series of Securities by giving written notice of resignation to the Issuer. Upon receiving such notice of resignation, the Issuer shall promptly appoint a successor trustee or trustees with respect to the applicable series by written instrument in duplicate, executed by authority of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee or trustees. If no successor Trustee shall have been so appointed with respect to any series and have accepted appointment within 30 days after the mailing of such notice of resignation, the resigning Trustee may petition, at the expense of the Issuer, any court of competent jurisdiction for the appointment of a successor Trustee, or any Securityholder who has been a bona fide Holder of a Security or Securities of the applicable series for at least six months may, subject to the provisions of Section 4.12, on behalf of himself and all others similarly situated, petition any such court for the appointment of a successor Trustee. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, appoint a successor Trustee.

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

(i) the Trustee shall fail to comply with the provisions of Section 310(b) of the Trust Indenture Act of 1939 with respect to any series of Securities after written request therefor by the Issuer or by any Securityholder who has been a bona fide Holder of a Security or Securities of such series for at least six months;

(ii) the Trustee shall cease to be eligible in accordance with the provisions of Section 310(a) of the Trust Indenture Act of 1939 and shall fail to resign after written request therefor by the Issuer or by any Securityholder; or

(iii) the Trustee shall become incapable of acting with respect to any series of Securities, or shall be adjudged a bankrupt or insolvent, or a receiver or liquidator of the Trustee or of its property shall be appointed, or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation; then, in any such case, the Issuer may remove the Trustee with respect to the applicable series of Securities and appoint a successor trustee for such series by written instrument, in duplicate, executed by order of the Board of Directors of the Issuer, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor Trustee, or, subject to Section 315(e) of the Trust Indenture Act of 1939, any Securityholder who has been a bona fide Holder of a Security or Securities of such series for at least six months may on behalf of himself and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee with respect to such series. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(c) The Holders of a majority in aggregate Principal amount of the Securities of each series at the time outstanding may at any time remove the Trustee with respect to Securities of such series and appoint a successor Trustee with respect to the Securities of such series by delivering to the Trustee so removed, to the successor Trustee so appointed and to the Issuer the evidence provided in Section 6.01 of the action in that regard taken by the Securityholders.

(d) Any resignation or removal of the Trustee with respect to any series and any appointment of a successor trustee with respect to such series pursuant to any of the provisions of this Section 5.09 shall become effective upon acceptance of appointment by the successor trustee as provided in Section 5.10.

Section 5.10 *Acceptance of Appointment by Successor.* Any successor Trustee appointed as provided in Section 5.09 shall execute and deliver to the Issuer and to its predecessor Trustee an instrument accepting such appointment hereunder, and thereupon the resignation or removal of the predecessor Trustee with respect to all or any applicable series shall become effective and such successor Trustee, without any further act, deed or conveyance, shall become vested with all rights, powers, duties and obligations with respect to such series of its predecessor hereunder, with like effect as if originally named as Trustee for such series hereunder. On the written request of the Issuer or of the successor Trustee, upon payment of its charges then unpaid, the Trustee ceasing to act shall, subject to Section 5.06, pay over to the successor Trustee all monies at the time held by it hereunder and shall execute and deliver an instrument transferring to such successor Trustee all such rights, powers, duties and obligations. Upon request of any such successor Trustee, the Issuer shall execute any and all instruments in writing for more fully and certainly vesting in and confirming to such successor Trustee all such rights and powers. Any Trustee ceasing to act shall, nevertheless, retain a prior claim upon all property or funds held or collected by such Trustee to secure any amounts then due it pursuant to the provisions of Section 5.06.

If a successor Trustee is appointed with respect to the Securities of one or more (but not all) series, the Issuer, the predecessor Trustee and each successor Trustee with respect to the Securities of any applicable series shall execute and deliver an indenture supplemental hereto which shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the predecessor Trustee with respect to the Securities of any series as to which the predecessor Trustee is not retiring shall continue to be vested in the predecessor Trustee, and shall add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee, it being understood that nothing herein or in such supplemental indenture shall constitute such Trustees co-trustees of the same trust and that each such Trustee shall be Trustee of a trust or trusts under separate indentures.

Upon acceptance of appointment by any successor Trustee as provided in this Section 5.10, the Issuer shall mail notice thereof by first-class mail to the Holders of Securities of any series for which such successor Trustee is acting as Trustee at their last addresses as they shall appear in the Security register. If the acceptance of appointment is substantially contemporaneous with the resignation, then the notice called for by the preceding sentence may be combined with the notice called for by Section 5.09. If the Issuer fails to mail such notice within 10 days after acceptance of appointment by the successor Trustee, the successor Trustee shall cause such notice to be mailed at the expense of the Issuer.

Section 5.11 *Merger, Conversion, Consolidation or Succession to Business of Trustee.* Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to all or substantially all the corporate trust business of the Trustee, shall be the successor of the Trustee hereunder, provided that such corporation shall be eligible under the provisions of Section 5.08, without the execution or filing of any paper or any further act on the part of any of the parties hereto, anything herein to the contrary notwithstanding.

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

Section 5.12 *Reports to the Trustee.* The Trustee shall transmit to Holders such reports concerning the Trustee and its actions under this Indenture as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant thereto. If required by Section 313(a) of the Trust Indenture Act, the Trustee shall, within sixty days after each May 15 following the date of the initial issuance of Securities under this Indenture deliver to Holders a brief report, dated as of such May 15, which complies with the provisions of such Section 313(a).

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

## ARTICLE 6 CONCERNING THE SECURITYHOLDERS

Section 6.01 *Evidence of Action Taken by Securityholders.* Any request, demand, authorization, direction, notice, consent, waiver or other action provided by this Indenture to be given or taken by a specified percentage in Principal amount of the Securityholders of any or all series may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such specified percentage of Securityholders in person or by agent duly appointed in writing; and, except as herein otherwise expressly provided, such action shall become effective when such instrument or instruments are delivered to the Trustee. Proof of execution of any instrument or of a writing appointing any such agent shall be sufficient for any purpose of this Indenture and (subject to Section 5.01 and Section 5.02) conclusive in favor of the Trustee and the Issuer, if made in the manner provided in this Article.

Section 6.02 *Proof of Execution of Instruments and of Holding of Securities; Record Date.* Subject to Section 5.01 and Section 5.02, the execution of any instrument by a Securityholder or his agent or proxy may be proved by the certificate of any notary public or other officer authorized to take acknowledgment of deeds, that the Person executing such instrument acknowledged to such notary public or other such officer the execution thereof, or by an affidavit of a witness to such execution sworn to before any such notary public or other officer. Where such execution is by an officer of a corporation or association or a member of a partnership on behalf of such corporation, association or partnership, as the case may be, or by any other Person acting in a representative capacity, such certificate or affidavit shall also constitute sufficient proof of such Person's authority. The holding of Securities shall be proved by the Security register or by a certificate of the registrar thereof. The Issuer may set a record date for purposes of determining the identity of Holders of Securities of any series entitled to vote or consent to any action referred to in Section 6.01, which record date may be set at any time or from time to time by notice to the Trustee, for any date or dates (in the case of any adjournment or reconsideration) not more than 60 days nor less than five days prior to the proposed date of such vote or consent, and thereafter, notwithstanding any other provisions hereof, only Holders of Securities of such series of record on such record date shall be entitled to so vote or give such consent or revoke such vote or consent.

Section 6.03 *Holders to be Treated as Owners*. Prior to due presentation of a Security for registration of transfer, the Issuer, the Trustee and any agent of the Issuer or the Trustee may deem and treat the person in whose name any Security shall be registered upon the Security register for such series as the absolute owner of such Security (whether or not such Security shall be overdue and notwithstanding any notation of ownership or other writing thereon) for the purpose of receiving payment of or on account of the Principal of and, subject to the provisions of this Indenture, interest on such Security and for all other purposes, and neither the Issuer nor the Trustee nor any agent of the Issuer or the Trustee shall be affected by any notice to the contrary. All such payments so made to any such person, or upon his order, shall be valid, and, to the extent of the sum or sums so paid, effectual to satisfy and discharge the liability for monies payable upon any such Security.

Section 6.04 *Securities Owned by Issuer Deemed Not Outstanding*. In determining whether the Holders of the requisite aggregate Principal amount of Outstanding Securities of any or all series have concurred in any direction, consent or waiver under this Indenture, Securities which are owned by the Issuer or any other obligor on the Securities with respect to which such determination is being made or by any person directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer or any other obligor on the Securities with respect to which such determination is being made shall be disregarded and deemed not to be Outstanding for the purpose of any such determination, except that for the purpose of determining whether the Trustee shall be protected in relying on any such direction, consent or waiver only Securities as to which the Trustee has received written notice are so owned shall be so disregarded. Securities so owned which have been pledged in good faith may be regarded as Outstanding if the pledgee establishes to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not the Issuer or any other obligor upon the Securities or any person directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer or any other obligor on the Securities. In case of a dispute as to such right, the advice of counsel shall be full protection in respect of any decision made by the Trustee in accordance with such advice. Upon request of the Trustee, the Issuer shall furnish to the Trustee promptly an Officers' Certificate listing and identifying all Securities, if any, known by the Issuer to be owned or held by or for the account of any of the above-described persons; and, subject to Section 5.01 and Section 5.02, the Trustee shall be entitled to accept such Officers' Certificate as conclusive evidence of the facts therein set forth and of the fact that all Securities not listed therein are Outstanding for the purpose of any such determination.

Section 6.05 *Right of Revocation of Action Taken*. At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 6.01, of the taking of any action by the Holders of the percentage in aggregate Principal amount of the Securities of any or all series, as the case may be, specified in this Indenture in connection with such action, any Holder of a Security the serial number of which is shown by the evidence to be included among the serial numbers of the Securities the Holders of which have consented to such action may, by filing written notice at the Corporate Trust Office and upon proof of holding as provided in this Article, revoke such action so far as concerns such Security. Except as aforesaid any such action taken by the Holder of any Security shall be conclusive and binding upon such Holder and upon all future Holders and owners of such Security and of any Securities issued in exchange or substitution therefor, irrespective of whether or not any notation in regard thereto is made upon any such Security. Any action taken by the Holders of the percentage in aggregate Principal amount of the Securities of any or all series, as the case may be, specified in this Indenture in connection with such action shall be conclusively binding upon the Issuer, the Trustee and the Holders of all the Securities affected by such action.

**ARTICLE 7**  
**SUPPLEMENTAL INDENTURES**

Section 7.01 *Supplemental Indentures Without Consent of Securityholders*. The Issuer, when authorized by a resolution of its Board of Directors certified to the Trustee, and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto for one or more of the following purposes:

(a) to evidence the succession of another corporation to the Issuer, or successive successions, and the assumption by the successor corporation of the covenants, agreements and obligations of the Issuer pursuant to Article 8;

(b) (i) to cure any ambiguity or to correct or supplement any provision contained herein or in any supplemental indenture which may be defective or inconsistent with any other provision contained herein or in any supplemental indenture, (ii) to conform the terms of Securities to the description thereof in the prospectus and prospectus supplement (or similar offering document) offering such Securities or (iii) to make such other provisions in regard to matters or questions arising under this Indenture or under any supplemental indenture as the Board of Directors may deem necessary or desirable and which shall not adversely affect the interests of the Holders of the Securities in any material respect;

(c) to establish the form or terms of Securities of any series as permitted by Section 2.01 and Section 2.03;

(d) to evidence and provide for the acceptance of appointment hereunder by a successor trustee with respect to the Securities of one or more series and to add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one trustee, pursuant to the requirements of Section 5.10;

(e) to comply with any requirements of the Commission in connection with the qualification of this Indenture under the Trust Indenture Act of 1939;

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

(g) to make any change that would not reasonably be expected to adversely affect the rights of any Holder in any material respect;

(h) to add to the covenants of the Issuer such new covenants, restrictions, conditions or provisions as its Board of Directors shall consider to be for the protection of the Holders of Securities, and with respect to which the Trustee has received an Opinion of Counsel to a similar effect, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an Event of Default; provided, that in respect of any such additional covenant, restriction, condition or provision such supplemental indenture may provide for a particular period of grace after default (which period may be shorter or longer than that allowed in the case of other defaults) or may provide for an immediate enforcement upon such an Event of Default or may limit the remedies available to the Trustee upon such an Event of Default or may limit the right of the Holders of a majority in aggregate Principal amount of the Securities of such series to waive such an Event of Default; or

(i) to make any change so long as no Securities are Outstanding.

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

Any supplemental indenture authorized by the provisions of this section may be executed without the consent of the Holders of any of the Securities at the time outstanding, notwithstanding any of the provisions of Section 7.02.

Section 7.02 *Supplemental Indentures With Consent of Securityholders*. With the consent (evidenced as provided in Article 6) of the Holders of not less than a majority in aggregate Principal amount of the Securities at the time Outstanding of all series affected by such supplemental indenture (voting as one class), the Issuer, when authorized by a resolution of its Board of Directors, and the Trustee may, from time to time and at any time, enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of any supplemental indenture or of modifying in any manner the rights of the Holders of the Securities of each such series; provided, that no such supplemental indenture shall without the consent of each Holder affected thereby:

(i) change the stated maturity of the Principal of, or the time of payment of any installment of interest on, such Holder's Security;

(ii) reduce the Principal thereof or the rate of interest thereon, or any premium payable with respect thereto;

- (iii) change any place of payment where, or the currency in which, any Security or any premium or the interest thereon is payable;
- (iv) change the provisions for calculating any redemption or repurchase price, including the definitions relating thereto;
- (v) make any change to Section 4.07 or Section 4.10 (except to include other provisions subject to Section 4.10);
- (vi) reduce the percentage in Principal amount of outstanding Securities of the relevant series the consent of whose Holders is required for any such supplemental indenture, for any waiver of compliance with any provisions of this Indenture or any defaults and their consequences provided for in this Indenture;
- (vii) alter or impair the right to convert any Security at the rate and upon the terms provided in Article 12;
- (viii) waive a default in the payment of Principal of or interest on any Security of such Holder (except pursuant to a rescission of acceleration pursuant to Section 4.01);
- (ix) adversely affect the rights of such Holder under any mandatory redemption or repurchase provision or any right of redemption or repurchase at the option of such Holder;
- (x) modify any of the provisions of this Section 7.02, except to increase any such percentage or to provide that certain other provisions of this Indenture cannot be modified or waived without the consent of the Holder of each outstanding Security affected thereby;
- (xi) modify Article 13 of this Indenture or the definition of "Senior Indebtedness" in Article 1 hereof in a manner adverse to Holders of any series of Securities; or
- (xii) change or waive any provision that, pursuant to a board resolution or indenture supplemental hereto establishing the terms of one or more series of Securities, is prohibited to be so changed or waived.

Upon the written request of the Issuer, accompanied by a copy of a resolution of the Board of Directors certified by the secretary or an assistant secretary of the Issuer authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Securityholders as aforesaid and other documents, if any, required by Section 6.01, the Trustee shall join with the Issuer in the execution of such supplemental indenture unless such supplemental indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion, but shall not be obligated to, enter into such supplemental indenture.

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

Promptly after the execution by the Issuer and the Trustee of any supplemental indenture pursuant to the provisions of this Section, the Issuer shall mail a notice thereof by first class mail to the Holders of Securities of each series affected thereby at their addresses as they shall appear on the registry books of the Issuer, setting forth in general terms the substance of such supplemental indenture. Any failure of the Issuer to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture.

*Section 7.03 Effect of Supplemental Indenture.* Upon the execution of any supplemental indenture pursuant to the provisions hereof, this Indenture shall be and be deemed to be modified and amended in accordance therewith and the respective rights, limitations of rights, obligations, duties and immunities under this Indenture of the Trustee, the Issuer and the Holders of Securities of each series affected thereby shall thereafter be determined, exercised and enforced hereunder subject in all respects to such modifications and amendments, and all the terms and conditions of any such supplemental indenture shall be and be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

*Section 7.04 Documents to Be Given to Trustee.* The Trustee, subject to the provisions of Section 5.01 and Section 5.02, may receive an Officers' Certificate and an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant to this Article 7 complies with the applicable provisions of this Indenture.

*Section 7.05 Notation on Securities in Respect of Supplemental Indentures.* Securities of any series authenticated and delivered after the execution of any supplemental indenture pursuant to the provisions of this Article may bear a notation in form approved by the Trustee for such series as to any matter provided for by such supplemental indenture or as to any action taken at any such meeting. If the Issuer or the Trustee shall so determine, new Securities of any series so modified as to conform, in the opinion of the Trustee and the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may be prepared by the Issuer, authenticated by the Trustee and delivered in exchange for the Securities of such series then outstanding.

**ARTICLE 8**  
**CONSOLIDATION, MERGER, SALE OR CONVEYANCE**

Section 8.01 *Issuer May Consolidate, etc., on Certain Terms.* The Issuer covenants that it will not merge or consolidate with any other Person or sell, convey, transfer, lease or otherwise dispose of all or substantially all of its property and assets to any Person (other than a consolidation with or merger with or into or a sale, conveyance, transfer, lease or other disposition to a Wholly-Owned Subsidiary with a positive net worth; *provided* that, in connection with any such merger of the Issuer with a Wholly-Owned Subsidiary, no consideration (other than common stock) in the surviving person or the Issuer shall be issued or distributed to the stockholders of the Issuer), unless (xv) either (x) the Issuer shall be the continuing corporation, or the successor corporation or (y) the Person formed by such consolidation or into which the Issuer is merged or that acquires by sale or conveyance substantially all the assets of the Issuer (if other than the Issuer) shall be a corporation or limited liability company organized and validly existing under the laws of the United States of America or any jurisdiction thereof and shall expressly assume the due and punctual payment of the Principal of and interest on all the Securities, according to their tenor, and the due and punctual performance and observance of all of the covenants and conditions of this Indenture to be performed or observed by the Issuer, by supplemental indenture satisfactory to the Trustee, executed and delivered to the Trustee by such Person, (xvi) immediately after giving effect to such transaction, no default or Event of Default shall have occurred and be continuing and (xvii) the Issuer delivers to the Trustee an Officers' Certificate and Opinion of Counsel, in each case stating that such consolidation, merger or transfer and such supplemental indenture complies with this Section 8.01 and that all conditions precedent provided for herein relating to such transaction have been complied with; *provided*, however, that the foregoing limitations shall not apply if, in the good faith determination of the Board of Directors, whose determination shall be evidenced by a board resolution certified to the Trustee, the principal purpose of such transaction is to change the state of incorporation of the Issuer; and *provided further* that any such transaction shall not have as one of its purposes the evasion of the foregoing limitations.

Section 8.02 *Successor Corporation Substituted.* In case of any such consolidation, merger, sale, conveyance, transfer, lease or other disposition, and following such an assumption by the successor Person, such successor Person shall succeed to and be substituted for the Issuer, with the same effect as if it had been named herein. Such successor Person may cause to be signed, and may issue either in its own name or in the name of the Issuer prior to such succession any or all of the Securities issuable hereunder which theretofore shall not have been signed by the Issuer and delivered to the Trustee; and, upon the order of such successor Person instead of the Issuer and subject to all the terms, conditions and limitations in this Indenture prescribed, the Trustee, pursuant to the terms hereof, shall authenticate and shall deliver any Securities which previously shall have been signed and delivered by the officers of the Issuer to the Trustee for authentication, and any Securities which such successor Person thereafter shall cause to be signed and delivered to the Trustee for that purpose. All of the Securities so issued shall in all respects have the same legal rank and benefit under this Indenture as the Securities theretofore or thereafter issued in accordance with the terms of this Indenture as though all of such Securities had been issued at the date of the execution hereof.

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

Upon the assumption by the successor Person in the manner described in this Article, the Issuer shall be discharged from all obligations and covenants under this Indenture and the Securities.

**ARTICLE 9**  
**DISCHARGE OF INDENTURE**

Section 9.01 *Defeasance Within One Year of Payment.* Except as otherwise provided in this Section 9.01, the Issuer may terminate its obligations under the Securities of any series and this Indenture with respect to Securities of such series if:

(i) all Securities of such series previously authenticated and delivered (other than destroyed, lost or wrongfully taken Securities of such series that have been replaced or Securities of such series for whose payment money or securities have theretofore been held in trust and thereafter repaid to the Issuer, as provided in Section 9.05) have been delivered to the Trustee for cancellation and the Issuer has paid all sums payable by it hereunder; or

(ii) (A) the Securities of such series mature within one year or all of them are to be called for redemption within one year under arrangements satisfactory to the Trustee for giving the notice of redemption, (B) the Issuer irrevocably deposits in trust with the Trustee, as trust funds solely for the benefit of the Holders of such Securities for that purpose, money or U.S. Government Obligations or a combination thereof sufficient (unless such funds consist solely of money, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee), without consideration of any reinvestment and after payment of all Federal, state and local taxes or other charges and assessments in respect thereof payable by the Trustee, to pay Principal of and interest on the Securities of such series to maturity or redemption, as the case may be, and to pay all other sums payable by it hereunder and (C) the Issuer delivers to the Trustee an Officers' Certificate and an Opinion of Counsel, in each case stating that all conditions precedent provided for herein relating to the satisfaction and discharge of this Indenture with respect to the Securities of such series have been complied with.

With respect to the foregoing clause (i), only the Issuer's obligations under Sections 5.06 and 9.05 in respect of the Securities of such series shall survive. With respect to the foregoing clause (ii), only the Issuer's obligations in Sections 2.03 through 2.11, 3.02, 5.06, 5.09 and 9.05 in respect of the Securities of such series shall survive until such Securities of such series are no longer outstanding. Thereafter, only the Issuer's obligations in Sections 5.06 and 9.05 in respect of the Securities of such series shall survive. After any such irrevocable deposit, the Trustee shall acknowledge in writing the discharge of the Issuer's obligations under the Securities of such series and this Indenture with respect to the Securities of such series except for those surviving obligations specified above.

Section 9.02 *Defeasance*. Except as provided below, the Issuer will be deemed to have paid and will be discharged from any and all obligations in respect of the Securities of any series and the provisions of this Indenture will no longer be in effect with respect to the Securities of such series (and the Trustee, at the expense of the Issuer, shall execute instruments in form and substance satisfactory to the Issuer and the Trustee acknowledging the same) if the following conditions shall have been satisfied:

(i) the Issuer has irrevocably deposited in trust with the Trustee as trust funds specifically pledged as security for, and dedicated solely to, Holders of the Securities of such series, for payment of the Principal of and interest on the Securities of such series, money or U.S. Government Obligations or a combination thereof sufficient (unless such funds consist solely of money, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee) without consideration of any reinvestment and after payment of all federal, state and local taxes or other charges and assessments in respect thereof payable by the Trustee, to pay and discharge the Principal of and accrued interest on the outstanding Securities of such series to maturity or earlier redemption (irrevocably provided for under arrangements satisfactory to the Trustee), as the case may be;

(ii) such deposit will not result in a breach or violation of, or constitute a default under, this Indenture or any other material agreement or instrument to which the Issuer is a party or by which it is bound;

(iii) 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;

(iv) the Issuer shall have delivered to the Trustee (1) either (x) a ruling directed to the Trustee received from the Internal Revenue Service to the effect 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 the Issuer's exercise of its option under this Section 9.02 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 and defeasance had not occurred or (y) an Opinion of Counsel to the same effect as the ruling described in clause (x) above and based upon a change in law and (2) an Opinion of Counsel to the effect that the Holders of the Securities of such series have a valid security interest in the trust funds subject to no prior liens under the UCC; and

(v) the Issuer has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, in each case stating that all conditions precedent provided for herein relating to the defeasance contemplated by this Section 9.02 of the Securities of such series have been complied with.

The Issuer's obligations in Sections 2.03 through 2.11, 3.02, 5.06, 5.09 and 9.05 with respect to the Securities of such series shall survive until such Securities are no longer outstanding. Thereafter, only the Issuer's obligations in Sections 5.06 and 9.05 shall survive.

Section 9.03 *Covenant Defeasance*. The Issuer may omit to comply with any term, provision or condition set forth in Sections 3.04, 3.06 or 3.08 (or any other specific covenant relating to the Securities of any series provided for in a Board Resolution or supplemental indenture pursuant to Section 2.03 which may by its terms be defeased pursuant to this Section 9.03), and such omission shall be deemed not to be an Event of Default under clause (c) of Section 4.01, with respect to the outstanding Securities of such series if:

(i) the Issuer has irrevocably deposited in trust with the Trustee as trust funds solely for the benefit of the Holders of the Securities of such series, for payment of the Principal of and interest, if any, on the Securities of such series, money or U.S. Government Obligations or a combination thereof in an amount sufficient (unless such funds consist solely of money, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee) without consideration of any reinvestment and after payment of all Federal, state and local taxes or other charges and assessments in respect thereof payable by the Trustee, to pay and discharge the Principal of and interest on the outstanding Securities of such series to maturity or earlier redemption (irrevocably provided for under arrangements satisfactory to the Trustee), as the case may be;

(ii) such deposit will not result in a breach or violation of, or constitute a default under, this Indenture or any other material agreement or instrument to which the Issuer is a party or by which it is bound;

(iii) 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;

(iv) the Issuer has delivered to the Trustee an Opinion of Counsel to the effect that (A) the Holders of the Securities of such series have a valid security interest in the trust funds subject to no prior liens under the UCC and (B) such Holders 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 amount and in the same manner and at the same times as would have been the case if such deposit and defeasance had not occurred; and

(v) the Issuer has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, in each case stating that all conditions precedent provided for herein relating to the covenant defeasance contemplated by this Section 9.03 of the Securities of such series have been complied with.

Section 9.04 *Application of Trust Money*. Subject to Section 9.05, the Trustee or Paying Agent shall hold in trust money or U.S. Government Obligations deposited with it pursuant to 9.01, 9.02, 9.03, as the case may be, in respect of the Securities of any series and shall apply the deposited money and the proceeds from deposited U.S. Government Obligations in accordance with the Securities of such series and this Indenture to the payment of Principal of and interest on the Securities of such series; provided that such money need not be segregated from other funds except to the extent required by law. The Issuer shall pay and indemnify the Trustee against any tax, fee or other charge imposed on or assessed against the U.S. Government Obligations deposited pursuant to 9.01, 9.02, 9.03, as the case may be, or the Principal and interest received in respect thereof, other than any such tax, fee or other charge that by law is for the account of the Holders.

Section 9.05 *Repayment to Issuer*. Subject to Sections 5.06 and 9.01, the Trustee and the Paying Agent shall promptly pay to the Issuer upon request set forth in an Officers' Certificate any money held by them at any time and not required to make payments hereunder and thereupon shall be relieved from all liability with respect to such money. Subject to applicable escheat or abandoned property laws, the Trustee and the Paying Agent shall pay to the Issuer upon written request any money held by them and required to make payments hereunder under this Indenture that remains unclaimed for two years; *provided* that the Trustee or such Paying Agent before being required to make any payment shall cause to be published at the expense of the Issuer once in an Authorized Newspaper or mail to each Holder entitled to such money at such Holder's address (as set forth in the register) notice that such money remains unclaimed and that after a date specified therein (which shall be at least 30 days from the date of such publication or mailing) any unclaimed balance of such money then remaining will be repaid to the Issuer. After payment to the Issuer, Holders entitled to such money must look to the Issuer for payment as unsecured general creditors unless an abandoned property law designates another Person, and all liability of the Trustee and such Paying Agent with respect to such money shall cease.

## ARTICLE 10 MISCELLANEOUS PROVISIONS

Section 10.01 *Incorporators, Stockholders, Officers and Directors Exempt from Individual Liability*. No recourse under or upon any obligation, covenant or agreement contained in this Indenture or in any Security, or because of any indebtedness evidenced thereby, shall be had against any incorporator, as such, or against any past, present or future stockholder, officer, director or employee, as such, of the Issuer or of any successor Person thereof, either directly or through the Issuer or any successor Person thereof, under any rule of law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise, all such liability being expressly waived and released by the acceptance of the Securities by the Holders thereof and as part of the consideration for the issue of the Securities.

Section 10.02 *Provisions of Indenture for the Sole Benefit of Parties and Securityholders*. Nothing in this Indenture or in the Securities, expressed or implied, shall give or be construed to give to any person, firm or corporation, other than the parties hereto and their successors and the Holders of the Securities, any legal or equitable right, remedy or claim under this Indenture or under any covenant or provision herein contained, all such covenants and provisions being for the sole benefit of the parties hereto and their successors and of the Holders of the Securities.

Section 10.03 *Successors and Assigns of Issuer Bound by Indenture*. All the covenants, stipulations, promises and agreements contained in this Indenture by or on behalf of the Issuer shall bind its successors and assigns, whether so expressed or not.

Section 10.04 *Notices and Demands on Issuer, Trustee and Securityholders*. Any notice or demand which by any provision of this Indenture is required or permitted to be given or served by the Trustee or by the Holders of Securities to or on the Issuer may be given or served by being deposited postage prepaid, first-class mail (except as otherwise specifically provided herein) addressed (until another address of the Issuer is filed by the Issuer with the Trustee) to Dermata Therapeutics, Inc. at 3525 Del Mar Heights, Rd., #322, San Diego, CA 92130, Attention: [Chief Financial Officer]. Any notice, direction, request or demand by the Issuer or any Securityholder to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or made at the Corporate Trust Office.

Where this Indenture provides for notice to Holders, such notice shall be sufficiently given (unless otherwise herein expressly provided) if in writing and mailed, first-class postage prepaid, to each Holder entitled thereto, at such Holder's last address as it appears in the Security register. In any case where notice to Holders is given by mail, neither the failure to mail such notice, nor any defect in any notice so mailed, to any particular Holder shall affect the sufficiency of such notice with respect to other Holders. Where this Indenture provides for notice in any manner, such notice may be waived in writing by the person entitled to receive such notice, either before or after the event, and such waiver shall be the equivalent of such notice. Waivers of notice by Holders shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

In case, by reason of the suspension of or irregularities in regular mail service, it shall be impracticable to mail notice to the Issuer and Securityholders when such notice is required to be given pursuant to any provision of this Indenture, then any manner of giving such notice as shall be satisfactory to the Trustee shall be deemed to be a sufficient giving of such notice.

Section 10.05 *Officers' Certificates and Opinions of Counsel; Statements to be Contained Therein.* Upon any application or demand by the Issuer to the Trustee to take any action under any of the provisions of this Indenture, the Issuer shall furnish to the Trustee an Officers' Certificate stating that all conditions precedent provided for in this Indenture relating to the proposed action have been complied with and an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent have been complied with, except that in the case of any such application or demand as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or demand, no additional certificate or opinion need be furnished.

Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant provided for in this Indenture shall include (a) a statement that the person making such certificate or opinion has read such covenant or condition, (b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based, (c) a statement that, in the opinion of such person, he 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.

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

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

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

Section 10.06 *Payments Due on Saturdays, Sundays and Holidays.* If the date of maturity of interest on or Principal of the Securities of any series or the date fixed for redemption or repayment of any such Security shall not be a Business Day, then payment of interest or Principal need not be made on such date, but may be made on the next succeeding Business Day with the same force and effect as if made on the date of maturity or the date fixed for redemption, and no interest shall accrue for the period after such date.

Section 10.07 *Conflict of Any Provision of Indenture with Trust Indenture Act of 1939.* If and to the extent that any provision of this Indenture limits, qualifies or conflicts with another provision incorporated in this Indenture by operation of Sections 310 to 317, inclusive, of the Trust Indenture Act of 1939, such incorporated provision shall control.

Section 10.08 *New York Law to Govern*. This Indenture and each Security shall be deemed to be a contract under the laws of the State of New York, and for all purposes shall be construed in accordance with the laws of such State.

Section 10.09 *Counterparts*. This Indenture may be executed in any number of counterparts, each of which shall be an original; but such counterparts shall together constitute but one and the same instrument.

Section 10.10 *Effect of Headings*. The Article and Section headings herein and the Table of Contents are for convenience only and shall not affect the construction hereof.

## **ARTICLE 11 REDEMPTION OF SECURITIES**

Section 11.01 *Applicability of Article*. The provisions of this Article shall be applicable to the Securities of any series which are redeemable before their maturity except as otherwise specified as contemplated by Section 2.03 for Securities of such series.

Section 11.02 *Notice of Redemption; Partial Redemptions*. Notice of redemption to the Holders of Securities of any series to be redeemed as a whole or in part at the option of the Issuer shall be given by mailing notice of such redemption by first class mail, postage prepaid, at least 30 days and not more than 60 days prior to the date fixed for redemption to such Holders of Securities of such series at their last addresses as they shall appear upon the registry books. Any notice which is mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the Holder receives the notice. Failure to give notice by mail, or any defect in the notice to the Holder of any Security of a series designated for redemption as a whole or in part shall not affect the validity of the proceedings for the redemption of any other Security of such series.

The notice of redemption to each such Holder shall specify the CUSIP numbers of such Securities to be redeemed, the Principal amount of each Security of such series held by such Holder to be redeemed, the date fixed for redemption, the redemption price, the place or places of payment, that payment will be made upon presentation and surrender of such Securities, that interest accrued to the date fixed for redemption will be paid as specified in such notice and that on and after said date interest thereon or on the portions thereof to be redeemed will cease to accrue. In case any Security of a series is to be redeemed in part only the notice of redemption shall state the portion of the Principal amount thereof to be redeemed, the method the Trustee shall use to determine such Securities to be redeemed as specified in the last paragraph of this Section 11.02, if applicable, and shall state that on and after the date fixed for redemption, upon surrender of such Security, a new Security or Securities of such series in Principal amount equal to the unredeemed portion thereof will be issued.

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

By 11:00 a.m. (New York City time) on the redemption date specified in the notice of redemption given as provided in this Section, the Issuer will deposit with the Trustee or with one or more paying agents (or, if the Issuer is acting as its own paying agent, set aside, segregate and hold in trust as provided in Section 3.03) an amount of money sufficient to redeem on the redemption date all the Securities of such series so called for redemption at the appropriate redemption price, together with accrued interest to the date fixed for redemption. If less than all the outstanding Securities of a series are to be redeemed, the Issuer will deliver to the Trustee at least 70 days (unless a shorter period shall be satisfactory to the Trustee) prior to the date fixed for redemption an Officers' Certificate stating the aggregate Principal amount of Securities to be redeemed.

In the case of the redemption of all of the Securities of a series outstanding, the Issuer shall notify the Trustee in writing of the redemption date 45 days (unless a shorter period shall be satisfactory to the Trustee) prior to the redemption date.

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

Section 11.03 *Payment of Securities Called for Redemption*. If notice of redemption has been given as above provided, the Securities or portions of Securities specified in such notice shall become due and payable on the date and at the place stated in such notice at the applicable redemption price, together with interest accrued to the date fixed for redemption, and on and after said date (unless the Issuer shall default in the payment of such Securities at the redemption price, together with interest accrued to said date) interest on the Securities or portions of Securities so called for redemption shall cease to accrue and, except as provided in Section 5.05 and Section 9.04, such Securities shall cease from and after the date fixed for redemption to be entitled to any benefit or security under this Indenture, and the Holders thereof shall have no right in respect of such Securities except the right to receive the redemption price thereof and unpaid interest to the date fixed for redemption. On presentation and surrender of such Securities at a place of payment specified in said notice, said Securities or the specified portions thereof shall be paid and redeemed by the Issuer at the applicable redemption price, together with interest accrued thereon to the date fixed for redemption; provided that any semiannual payment of interest becoming due on the date fixed for redemption shall be payable to the Holders of such Securities registered as such on the relevant record date subject to the terms and provisions of Section 2.07 hereof.

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

Upon presentation of any Security redeemed in part only, the Issuer shall execute and the Trustee shall authenticate and deliver to or on the order of the Holder thereof, at the expense of the Issuer, a new Security or Securities of such series, of authorized denominations, in Principal amount equal to the unredeemed portion of the Security so presented, pursuant to Sections 2.04, 2.05 and 2.06.

Section 11.04 *Exclusion of Certain Securities from Eligibility for Selection for Redemption*. Securities shall be excluded from eligibility for selection for redemption if they are identified by registration and certificate number in a written statement signed by an authorized officer of the Issuer and delivered to the Trustee at least 40 days prior to the last date on which notice of redemption may be given as being owned of record and beneficially by, and not pledged or hypothecated by either (a) the Issuer or (b) an entity specifically identified in such written statement directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer.

Section 11.05 *Conversion Arrangement On Call For Redemption*. In connection with any redemption of Securities, the Issuer shall deposit the amount due in connection with such redemption as required by Section 11.02 or it may arrange for the purchase and conversion of any Securities called for redemption by an agreement with one or more investment bankers or other purchasers to purchase such Securities and to make the deposit required of it by Section 11.02 on its behalf by paying to the Trustee or the Paying Agent in trust for the Securityholders, on or before 10:00 a.m. New York time on the redemption date, an amount no less than the redemption price, together with interest, if any, accrued to the redemption date of such Securities, in immediately available funds. Notwithstanding anything to the contrary contained in this Article 11, the obligation of the Issuer to pay the redemption price of such Securities, including all accrued interest, if any, shall be deemed to be satisfied and discharged to the extent such amount is so paid by such purchasers. If such an agreement is entered into, any Securities not duly surrendered for conversion by the Holders thereof may, at the option of the Issuer, be deemed, to the fullest extent permitted by law, acquired by such purchasers from such Holders and (notwithstanding anything to the contrary contained in Article 12) surrendered by such purchasers for conversion, all as of immediately prior to the close of business on the last day on which Securities of such series called for redemption may be converted in accordance with this Indenture and the terms of such Securities, subject to payment of the above amount aforesaid. The Trustee or the Paying Agent shall hold and pay to the Securityholders whose Securities are selected for redemption any such amount paid to it in the same manner as it would monies deposited with it by the Issuer for the redemption of Securities. Without the Trustee's and the Paying Agent's prior written consent, no arrangement between the Issuer and such purchasers for the purchase and conversion of any Securities shall increase or otherwise affect any of the powers, duties, responsibilities or obligations of the Trustee as set forth in this Indenture, and the Issuer agrees to indemnify the Trustee from, and hold it harmless against, any loss, liability or expense arising out of or in connection with any such arrangement for the purchase and conversion of any Securities between the Issuer and such purchasers, including the costs and expenses incurred by the Trustee and the Paying Agent in the defense of any claim or liability arising out of or in connection with the exercise or performance of any of its powers, duties, responsibilities or obligations under this Indenture.

**ARTICLE 12**  
**CONVERSION OF SECURITIES**

Section 12.01 *Applicability of Article*. Securities of any series which are convertible into Capital Stock at the option of the Securityholder shall be convertible in accordance with their terms and (unless otherwise specified as contemplated by Section 2.03 for Securities of any series) in accordance with this Article. Each reference in this Article 12 to “a Security” or “the Securities” refers to the Securities of the particular series that is convertible into Capital Stock. Each reference in this Article to “Capital Stock” into which Securities of any series are convertible refers to the class of Capital Stock into which the Securities of such series are convertible in accordance with their terms (as specified as contemplated by Section 2.03). If more than one series of Securities with conversion privileges are outstanding at any time, the provisions of this Article 12 shall be applied separately to each such series.

Section 12.02 *Right of Securityholders to Convert Securities*. Subject to and upon compliance with the terms of the Securities and the provisions of Section 11.05 and this Article 12, at the option of the Holder thereof, any Security of any series of any authorized denomination, or any portion of the Principal amount thereof which is \$1,000 or any integral multiple of \$1,000, may, at any time during the period specified in the Securities of such series, or in case such Security or portion thereof shall have been called for redemption, then in respect of such Security or portion thereof until and including, but not after (unless the Issuer shall default in payment due upon the redemption thereof) the close of business on the Business Day prior to the date fixed for redemption except that in the case of redemption at the option of the Securityholder, if specified in the terms of such Securities, such right shall terminate upon receipt of written notice of the exercise of such option, be converted into duly authorized, validly issued, fully paid and nonassessable shares of Capital Stock, as specified in such Security, at the conversion rate for each \$1,000 Principal amount of Securities (such initial conversion rate reflecting an initial conversion price specified in such Security) in effect on the conversion date, or, in case an adjustment in the conversion rate has taken place pursuant to the provisions of Section 12.05, then at the applicable conversion rate as so adjusted, upon surrender of the Security or Securities, the Principal amount of which is so to be converted, to the Issuer at any time during usual business hours at the office or agency to be maintained by it in accordance with the provisions of Section 3.02, accompanied by a written notice of election to convert as provided in Section 12.03 and, if so required by the Issuer and the Trustee, by a written instrument or instruments of transfer in form satisfactory to the Issuer and the Trustee duly executed by the registered Holder or his attorney duly authorized in writing. All Securities surrendered for conversion shall, if surrendered to the Issuer or any conversion agent, be delivered to the Trustee for cancellation and cancelled by it, or shall, if surrendered to the Trustee, be cancelled by it, as provided in Section 2.10.

The initial conversion price or conversion rate in respect of a series of Securities shall be as specified in the Securities of such series. The conversion price or conversion rate will be subject to adjustment on the terms set forth in Section 12.05 or such other or different terms, if any, as may be specified by Section 2.03 for Securities of such series. Provisions of this Indenture that apply to conversion of all of a Security also apply to conversion of a portion of it.

Section 12.03 *Issuance of Shares of Capital Stock on Conversion*. As promptly as practicable after the surrender, as herein provided, of any Security or Securities for conversion, the Issuer shall deliver or cause to be delivered at its said office or agency to or upon the written order of the Holder of the Security or Securities so surrendered a certificate or certificates representing the number of duly authorized, validly issued, fully paid and nonassessable shares of Capital Stock into which such Security or Securities may be converted in accordance with the terms thereof and the provisions of this Article 12. Prior to delivery of such certificate or certificates, the Issuer shall require a written notice at its said office or agency from the Holder of the Security or Securities so surrendered stating that the Holder irrevocably elects to convert such Security or Securities, or, if less than the entire Principal amount thereof is to be converted, stating the portion thereof to be converted. Such notice shall also state the name or names (with address and social security or other taxpayer identification number) in which said certificate or certificates are to be issued. Such conversion shall be deemed to have been made at the time that such Security or Securities shall have been surrendered for conversion and such notice shall have been received by the Issuer or the Trustee, the rights of the Holder of such Security or Securities as a Securityholder shall cease at such time, the person or persons entitled to receive the shares of Capital Stock upon conversion of such Security or Securities shall be treated for all purposes as having become the record holder or holders of such shares of Capital Stock at such time and such conversion shall be at the conversion rate in effect at such time. In the case of any Security of any series which is converted in part only, upon such conversion, the Issuer shall execute and the Trustee shall authenticate and deliver to the Holder thereof, as requested by such Holder, a new Security or Securities of such series of authorized denominations in aggregate Principal amount equal to the unconverted portion of such Security.

If the last day on which a Security may be converted is not a Business Day in a place where a conversion agent is located, the Security may be surrendered to that conversion agent on the next succeeding day that is a Business Day.

The Issuer will not be required to deliver certificates for shares of Capital Stock upon conversion while its stock transfer books are closed for a meeting of shareholders or for the payment of dividends or for any other purpose, but certificates for shares of Capital Stock shall be delivered as soon as the stock transfer books shall again be opened.

Section 12.04 *No Payment or Adjustment for Interest or Dividends*. Unless otherwise specified as contemplated by Section 2.03 for Securities of such series, Securities surrendered for conversion during the period from the close of business on any regular record date (or special record date for payment of defaulted interest) next preceding any interest payment date to the opening of business on such interest payment date (except Securities called for redemption on a redemption date within such period) when surrendered for conversion must be accompanied by payment of an amount equal to the interest thereon which the registered Holder is to receive on such interest payment date. Payment of interest shall be made, as of such interest payment date or such date, as the case may be, to the Holder of record of the Securities as of such regular, or special record date, as applicable. Except where Securities surrendered for conversion must be accompanied by payment as described above, no interest on converted Securities will be payable by the Issuer on any interest payment date subsequent to the date of conversion. No other payment or adjustment for interest or dividends is to be made upon conversion. Notwithstanding the foregoing, upon conversion of any Original Issue Discount Security, the fixed number of shares of Capital Stock into which such Security is convertible delivered by the Issuer to the Holder thereof shall be applied, first, to pay the accrued original issue discount attributable to the period from the date of issuance to the date of conversion of such Security, and, second, to pay the balance of the Principal amount of such Security.

Section 12.05 *Adjustment of Conversion Rate*. Unless otherwise specified as contemplated by Section 2.03 for Securities of such series, the conversion rate for Securities in effect at any time shall be subject to adjustment as follows:

(a) In case the Issuer shall (i) declare a dividend or make a distribution on the class of Capital Stock into which Securities of such series are convertible in shares of its Capital Stock, (ii) subdivide the outstanding shares of the class of Capital Stock into which Securities of such series are convertible into a greater number of shares, (iii) combine the outstanding shares of the class of Capital Stock into which Securities of such series are convertible into a smaller number of shares or (iv) issue by reclassification of the shares of the class of Capital Stock into which Securities of such series are convertible (including any such reclassification in connection with a consolidation or merger in which the Issuer is the continuing corporation) any shares, the conversion rate for the Securities of such series in effect at the time of the record subdivision, combination or reclassification, shall be proportionately adjusted so that the Holder of any Security of such series surrendered for conversion after such time shall be entitled to receive the number and kind of shares which he would have owned or have been entitled to receive had such Security been converted immediately prior to such time. Similar adjustments shall be made whenever any event listed above shall occur.

(b) In case the Issuer shall fix a record date for the issuance of rights or warrants to all holders of the class of Capital Stock into which Securities of such series are convertible entitling them (for a period expiring within 45 days after such record date) to subscribe for or purchase shares of such class of Capital Stock (or securities convertible into shares of such class of Capital Stock) at a price per share (or, in the case of a right or warrant to purchase securities convertible into such class of Capital Stock, having a conversion price per share, after adding thereto the exercise price, computed on the basis of the maximum number of shares of such class of Capital Stock issuable upon conversion of such convertible securities, per share of such class of Capital Stock, so issuable) less than the current market price per share of such class of Capital Stock (as defined in subsection (e) below) on the date on which such issuance was declared or otherwise announced by the Issuer (the “**Determination Date**”), the number of shares of such class of Capital Stock into which each \$1,000 Principal amount of Securities shall be convertible after such record date shall be determined by multiplying the number of shares of such class of Capital Stock into which such Principal amount of Securities was convertible immediately prior to such record date by a fraction, of which the numerator shall be the number of shares of such class of Capital Stock outstanding on the Determination Date plus the number of additional shares of such class of Capital Stock offered for subscription or purchase (or in the case of a right or warrant to purchase securities convertible into such class of Capital Stock, the aggregate number of additional shares of such class of Capital Stock into which the convertible securities so offered are initially convertible), and of which the denominator shall be the number of shares of such class of Capital Stock outstanding on the Determination Date plus the number of shares of such class of Capital Stock obtained by dividing the aggregate offering price of the total number of shares so offered (or, in the case of a right or warrant to purchase securities convertible into such class of Capital Stock, the aggregate initial conversion price of the convertible securities so offered, after adding thereto the aggregate exercise price of such rights or warrants computed on the basis of the maximum number of shares of such class of Capital Stock issuable upon conversion of such convertible securities) by such current market price. Shares of such class of Capital Stock of the Issuer owned by or held for the account of the Issuer shall not be deemed outstanding for the purpose of any such computation. Such adjustment shall be made successively whenever such a record date is fixed; and to the extent that shares of such class of Capital Stock are not delivered (or securities convertible into shares of such class of Capital Stock are not delivered) after the expiration of such rights or warrants (or, in the case of rights or warrants to purchase securities convertible into such class of Capital Stock once exercised, the expiration of the conversion right of such securities) the conversion rate shall be readjusted to the conversion rate which would then be in effect had the adjustments made upon the issuance of such rights or warrants (or securities convertible into shares) been made upon the basis of delivery of only the number of shares actually delivered. In the event that such rights or warrants are not so issued, the conversion rate shall again be adjusted to be the conversion rate which would then be in effect if such record date had not been fixed.

(c) In case the Issuer shall fix a record date for the making of a distribution to all holders of the class of Capital Stock into which Securities of such series are convertible (including any such distribution made in connection with a consolidation or merger in which the Issuer is the continuing corporation) of evidences of its indebtedness or assets (excluding any cash dividends paid from retained earnings and dividends payable in Capital Stock for which adjustment is made pursuant to subsection (a) above or (d) below) or subscription rights or warrants (excluding subscription rights or warrants to purchase the class of Capital Stock into which Securities of such series are convertible), the number of shares of such class of Capital Stock into which each \$1,000 Principal amount of Securities of such series shall be convertible after such record date shall be determined by multiplying the number of shares of such class of Capital Stock into which such Principal amount of Securities was convertible immediately prior to such record date by a fraction, of which the numerator shall be the fair market value of the assets of the Issuer, after deducting therefrom all liabilities of the Issuer and all preferences (including accrued but unpaid dividends) in respect of classes of Capital Stock having a preference with respect to the assets of the Issuer over such class of Capital Stock (all as determined by the Board of Directors, whose determination shall be conclusive, and described in a certificate signed by chairman of the Issuer's Board of Directors, any vice president, its treasurer, any assistant treasurer, its secretary or any assistant secretary, filed with the Trustee and each conversion agent) on such record date, and of which the denominator shall be such fair market value after deducting therefrom such liabilities and preferences, less the fair market value (as determined by the Board of Directors, whose determination shall be conclusive, and described in a statement filed with the Trustee and each conversion agent) of the assets or evidences of indebtedness, so distributed or of such subscription rights or warrants applicable, so distributed. Such adjustment shall be made successively whenever such a record date is fixed; and in the event that such distribution is not so made, the conversion rate shall again be adjusted to the conversion rate which would then be in effect if such record date had not been fixed.

(d) In case the Issuer shall, by dividend or otherwise, distribute to all holders of its Capital Stock cash (excluding any dividend or distribution in connection with the liquidation, dissolution or winding up of the Issuer, whether voluntary or involuntary), then, in such case, unless the Issuer elects to reserve such cash for distribution to the Holders of the Securities upon the conversion of the Securities so that any such Holder converting Securities will receive upon such conversion, in addition to the shares of Capital Stock to which such Holder is entitled, the amount of cash which such Holder would have received if such Holder had, immediately prior to the record date for such distribution of cash, converted its Securities into Capital Stock, the conversion rate shall be adjusted so that the same shall equal the rate determined by multiplying the conversion rate in effect immediately prior to the record date by a fraction of which the denominator shall be the current market price of the Capital Stock (determined as provided in Section 12.05(e) on the record date less the amount of cash so distributed (and not excluded as provided above) applicable to one share of Capital Stock and the numerator shall be such current market price of the Capital Stock (determined as provided in Section 12.05(e)), such adjustment to be effective immediately prior to the opening of business on the day following the record date; provided, however, that in the event the portion of the cash so distributed applicable to one share of Capital Stock is equal to or greater than the current market price of the Capital Stock (determined as provided in (e)Section 12.05(e)) on the record date, in lieu of the foregoing adjustment, adequate provision shall be made so that each Securityholder shall have the right to receive upon conversion the amount of cash such Holder would have received had such Holder converted each Security on the record date. If such dividend or distribution is not so paid or made, the conversion rate shall again be adjusted to be the conversion rate which would then be in effect if such dividend or distribution had not been declared.

(e) For the purpose of any computation under subsections (b) and (d) above and Section 12.06, the current market price per share of the Capital Stock on any date as of which such price is to be computed shall mean the average of the Closing Prices for the 30 consecutive Business Days commencing 45 Business Days before such date.

(f) No adjustment in the conversion rate shall be required unless such adjustment would require a cumulative increase or decrease of at least 1% in such rate; provided, however, that any adjustments which by reason of this subsection (f) are not required to be made shall be carried forward and taken into account in any subsequent adjustment; and *provided further*, that adjustments shall be required and made in accordance with the provisions of this Article 12 (other than this subsection (f)) not later than such time as may be required in order to preserve the tax-free nature of a States income tax purposes to the Holders of Securities or the class of Capital Stock into which such Securities are convertible. All calculations under this Article 12 shall be made to the nearest cent or to the nearest one-thousandth of a share, as the case may be. Anything in this Section 12.05 to the contrary notwithstanding, the Issuer shall be entitled to make such adjustments in the conversion rate, in addition to those required by this Section 12.05, as it in its discretion shall determine to be advisable in order that any stock dividend, subdivision of shares, distribution of rights to purchase stock or securities, or distribution of securities convertible into or exchangeable for stock hereafter made by the Issuer to its shareholders shall not be taxable for United States income tax purposes.

(g) Whenever the conversion rate is adjusted, as herein provided, the Issuer shall promptly file with the Trustee and with the office or agency maintained by the Issuer for the conversion of Securities of such series pursuant to Section 3.02, a certificate of a firm of independent public accountants of recognized national standing selected by the Board of Directors (who may be the regular accountants employed by the Issuer) setting forth the conversion rate after such adjustment and setting forth a brief statement of the facts requiring such adjustment and a computation thereof. Such certificate shall be conclusive evidence of the correctness of such adjustment. Neither the Trustee nor any conversion agent shall be under any duty or responsibility with respect to any such certificate or any facts or computations set forth therein, except to exhibit said certificate from time to time to any Securityholder of such series desiring to inspect the same. The Issuer shall promptly cause a notice setting forth the adjusted conversion rate to be mailed to the Holders of Securities of such series, as their names and addresses appear upon the register of the Issuer.

(h) In the event that at any time, as a result of shares of any other class of Capital Stock becoming issuable in exchange or substitution for or in lieu of shares of the class of Capital Stock into which such Securities are convertible or as a result of an adjustment made pursuant to subsection (a) above, the Holder of any Security of such series thereafter surrendered for conversion shall become entitled to receive any shares of the Issuer other than shares of the class of Capital Stock into which the Issuer of such series are convertible, thereafter the number of such other shares so receivable upon conversion of any Security shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to the class of Capital Stock into which the Securities of such series are convertible contained in subsections (a) to (f), inclusive, above, and the provisions of this Article 12 with respect to the class of Capital Stock into which the Securities of such series are convertible shall apply on like terms to any such other shares.

(i) The conversion rate with respect to any Original Issue Discount Security, the terms of which provide for convertibility, shall not be adjusted during the term of such Original Issue Discount Security for accrued original issue discount.

(j) In the event that the Securities of any series are convertible into more than one class of Capital Stock, the provisions of this Section 12.05 shall apply separately to events affecting each such class.

Section 12.06 *No Fractional Shares to Be Issued*. No fractional shares of Capital Stock shall be issued upon conversions of Securities. If more than one Security of any series shall be surrendered for conversion at one time by the same Holder, the number of full shares which shall be issuable upon conversion thereof shall be computed on the basis of the aggregate Principal amount of the Securities of such series (or specified portions thereof to the extent permitted hereby) so surrendered. Instead of a fraction of a share of Capital Stock which would otherwise be issuable upon conversion of any Security or Securities (or specified portions thereof), the Issuer shall pay a cash adjustment in respect of such fraction of a share in an amount equal to the same fractional interest of the current market price (as defined in Section 12.05) per share of Capital Stock on the Business Day next preceding the day of conversion.

Section 12.07 *Preservation of Conversion Rights Upon Consolidation, Merger, Sale or Conveyance*. In case of any consolidation of the Issuer with, or merger of the Issuer into, any other corporation (other than a consolidation or merger in which the Issuer is the continuing corporation), or in the case of any sale or transfer of all or substantially all of the assets of the Issuer, the corporation formed by such consolidation or the corporation into which the Issuer shall have been merged or the corporation which shall have acquired such assets, as the case may be, shall execute and deliver to the Trustee, a supplemental indenture, subject to the provisions of Article 12 and ARTICLE 8 as they relate to supplemental indentures, providing that the Holder of each Security then Outstanding of a series which was convertible into Capital Stock shall have the right thereafter to convert such Security into the kind and amount of shares of stock and other securities and property, including cash, receivable upon such consolidation, merger, sale or transfer by a holder of the number of shares of Capital Stock of the Issuer into which such Securities might have been converted immediately prior to such consolidation, merger, sale or transfer. Such supplemental indenture shall conform to the provisions of the Trust Indenture Act of 1939 as then in effect and shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 12. Neither the Trustee nor any conversion agent shall be under any responsibility to determine the correctness of any provision contained in any such supplemental indenture relating either to the kind or amount of shares of stock or other securities or property receivable by Securityholders upon the conversion of their Securities after any such consolidation, merger, sale or transfer, or to any adjustment to be made with respect there to and, subject to the provisions of Article 5, may accept as conclusive evidence of the correctness of any such provisions, and shall be protected in relying upon, an Opinion of Counsel with respect thereto. If in the case of any such consolidation, merger, sale or transfer, the stock or other securities and property receivable by a Holder of the Securities includes stock or other securities and property of a corporation other than the successor or purchasing corporation, then such supplemental indenture shall also be executed by such other corporation and shall contain such additional provisions to protect the interests of the Holders of the Securities as the Board of Directors shall reasonably consider necessary. The above provisions of this Section 12.07 shall similarly apply to successive consolidations, mergers, sales or transfers.

Section 12.08 Notice to Security Holders of a Series Prior to Taking Certain Types of Action. With respect to the Securities of any series, in case:

(a) the Issuer shall authorize the issuance to all holders of the class of Capital Stock into which Securities of such series are convertible of rights or warrants to subscribe for or purchase shares of its Capital Stock or of any other right;

(b) the Issuer shall authorize the distribution to all holders of the class of Capital Stock into which Securities of such series are convertible of evidences of its indebtedness or assets (except for the exclusions with respect to certain dividends set forth in Section 12.05(c));

(c) of any subdivision, combination or reclassification of the class of Capital Stock into which Securities of such series are convertible or of any consolidation or merger to which the Issuer is a party and for which approval by the shareholders of the Issuer is required, or of the sale or transfer of all or substantially all of the assets of the Issuer; or

(d) of the voluntary or involuntary dissolution, liquidation or winding up of the Issuer;

then the Issuer shall cause to be filed with the Trustee and at the office or agency maintained for the purpose of conversion of Securities of such series pursuant to Section 3.02, and shall cause to be mailed to the Holders of Securities of such series, at their last addresses as they shall appear upon the register of the Issuer, at least 10 days prior to the applicable record date hereinafter specified, a notice stating (i) the date as of which the holders of such class of Capital Stock to be entitled to receive any such rights, warrants or distribution are to be determined, or (ii) the date on which any such subdivision, combination, reclassification, consolidation, merger, sale, transfer, dissolution, liquidation, winding up or other action is expected to become effective, and the date as of which it is expected that holders of record of such class of Capital Stock shall be entitled to exchange their Capital Stock of such class for securities or other property, if any, deliverable upon such subdivision, combination, reclassification, consolidation, merger, sale, transfer, dissolution, liquidation, winding up or other action. The failure to give the notice required by this Section 12.08 or any defect therein shall not affect the legality or validity of any distribution, right, warrant, subdivision, combination, reclassification, consolidation, merger, sale, transfer, dissolution, liquidation, winding up or other action, or the vote upon any of the foregoing. Such notice shall also be published by and at the expense of the Issuer not later than the aforesaid filing date at least once in an Authorized Newspaper.

Section 12.09 *Covenant to Reserve Shares for Issuance on Conversion of Securities.* The Issuer covenants that at all times it will reserve and keep available out of each class of its authorized Capital Stock, free from preemptive rights, solely for the purpose of issue upon conversion of Securities of any series as herein provided, such number of shares of Capital Stock of such class as shall then be issuable upon the conversion of all Outstanding Securities of such series. The Issuer covenants that an shares of Capital Stock which shall be so issuable shall, when issued or delivered, be duly and validly issued shares of the class of authorized Capital Stock into which Securities of such series are convertible, and shall be fully paid and nonassessable, free of all liens and charges and not subject to preemptive rights and that, upon conversion, the appropriate capital stock accounts of the Issuer will be duly credited.

Section 12.10 *Compliance with Governmental Requirements.* The Issuer covenants that if any shares of Capital Stock required to be reserved for purposes of conversion of Securities hereunder require registration or listing with or approval of any governmental authority under any Federal or State law, pursuant to the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, or any national or regional securities exchange on which such Capital Stock is listed at the time of delivery of any shares of such Capital Stock, before such shares may be issued upon conversion, the Issuer will use reasonable efforts to cause such shares to be duly registered, listed or approved, as the case may be.

Section 12.11 *Payment of Taxes Upon Certificates for Shares Issued Upon Conversion.* The issuance of certificates for shares of Capital Stock upon the conversion of Securities shall be made without charge to the converting Securityholders for any tax (including, without limitation, all documentary and stamp taxes) in respect of the issuance and delivery of such certificates, and such certificates shall be issued in the respective names of, or in such names as may be directed by, the Holders of the Securities converted; provided, however, that the Issuer shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any such certificate in a name other than that of the Holder of the Security converted, and the Issuer shall not be required to issue or deliver such certificates unless or until the person or persons requesting the issuance thereof shall have paid to the Issuer the amount of such tax or shall have established to the satisfaction of the Issuer that such tax has been paid.

Section 12.12 *Trustee's Duties with Respect to Conversion Provisions.* The Trustee and any conversion agent shall not at any time be under any duty or responsibility to any Securityholder to determine whether any facts exist which may require any adjustment of the conversion rate or conversion price, or with respect to the nature or extent of any such adjustment when made, or with respect to the method employed, or herein or in any supplemental indenture provided to be employed, in making the same. Neither the Trustee nor any conversion agent shall be accountable with respect to the registration under securities laws, listing, validity or value (or the kind or amount) of any shares of Capital Stock, or of any other securities or property, which may at any time be issued or delivered upon the conversion of any Security; and neither the Trustee nor any conversion agent makes any representation with respect thereto. Neither the Trustee nor any conversion agent shall be responsible for any failure of the Issuer to make any cash payment or to issue, transfer or deliver any shares of stock or stock certificates or other securities or property upon the surrender of any Security for the purpose of conversion; and the Trustee, subject to the provisions of Article 5, and any conversion agent shall not be responsible for any failure of the Issuer to comply with any of the covenants of the Issuer contained in this Article 12.

### **ARTICLE 13 SUBORDINATION OF SECURITIES**

Section 13.01 *Agreement Of Subordination.* The Issuer covenants and agrees, and each Holder of Securities issued hereunder by his acceptance thereof likewise covenants and agrees, that all Securities shall be issued subject to the provisions of this ARTICLE 13; and each Holder, whether upon original issue or upon transfer or assignment thereof, accepts and agrees to be bound by such provisions.

The payment of the principal of, premium, if any, and interest on all Securities issued hereunder shall, to the extent and in the manner hereinafter set forth, be subordinated and subject in right of payment to the prior payment in full of all Senior Indebtedness, whether outstanding at the date of this Indenture or thereafter incurred.

The provisions of this ARTICLE 13 define the subordination of the Securities, as obligations of the Issuer, with respect to Senior Indebtedness of the Issuer, as defined for the Issuer.

No provision of this ARTICLE 13 shall prevent the occurrence of any default or Event of Default hereunder.

Section 13.02 *Payments to Holders.* In the event and during the continuation of any default in the payment of principal, premium, interest or any other payment due on any Senior Indebtedness of the Issuer continuing beyond the period of grace, if any, specified in the instrument or lease evidencing such Senior Indebtedness of the Issuer, then, unless and until such default shall have been cured or waived or shall have ceased to exist, no payment shall be made by the Issuer with respect to the principal of, or premium, if any, or interest on the Securities, except payments made pursuant to Article 9 hereof from amounts deposited with the Trustee pursuant thereto prior to the happening of such default.

Upon any payment by the Issuer, or distribution of assets of the Issuer of any kind or character, whether in cash, property or securities, to creditors upon any dissolution or winding-up or liquidation or reorganization of the Issuer, whether voluntary or involuntary or in bankruptcy, insolvency, receivership or other proceedings, all amounts due or to become due upon all Senior Indebtedness of the Issuer shall first be paid in full, or payment thereof provided for in money in accordance with its terms, before any payment is made on account of principal (including, if applicable, any cash due upon conversion the Securities), premium, if any, or interest on the Securities (except payments made pursuant to ARTICLE 9 hereof from amounts deposited with the Trustee pursuant thereto prior to the happening of such dissolution, winding-up, liquidation or reorganization); and upon any such dissolution or winding-up or liquidation or reorganization any payment by the Issuer, or distribution of assets of the Issuer of any kind or character, whether in cash, property or securities, to which the holders of the Securities or the Trustee would be entitled, except for the provisions of this ARTICLE 13, shall (except as aforesaid) be paid by the Issuer or by any receiver, trustee in bankruptcy, liquidating trustee, agent or other Person making such payment or distribution, or by the holders of the Securities or by the Trustee under this Indenture if received by them or it, directly to the holders of Senior Indebtedness of the Issuer (pro rata to such holders on the basis of the respective amounts of Senior Indebtedness of the Issuer held by such holders, as calculated by the Issuer) or their representative or representatives, or to the trustee or trustees under any indenture pursuant to which any instruments evidencing any Senior Indebtedness of the Issuer may have been issued, as their respective interests may appear, to the extent necessary to pay all Senior Indebtedness of the Issuer in full, in money or money's worth, after giving effect to any concurrent payment or distribution to or for the holders of Senior Indebtedness of the Issuer, before any payment or distribution is made to the holders of the Securities or to the Trustee.

In the event that, notwithstanding the foregoing, any payment or distribution of assets of the Issuer of any kind or character, whether in cash, property or securities, prohibited by the foregoing, shall be received by the Trustee or the holders of the Securities before all Senior Indebtedness of the Issuer is paid in full, or provision is made for such payment in money in accordance with its terms, such payment or distribution shall be held in trust for the benefit of and shall be paid over or delivered to the holders of Senior Indebtedness of the Issuer or their representative or representatives, or to the trustee or trustees under any indenture pursuant to which any instruments evidencing any Senior Indebtedness of the Issuer may have been issued, as their respective interests may appear, as calculated by the Issuer, for application to the payment of all Senior Indebtedness of the Issuer remaining unpaid to the extent necessary to pay all Senior Indebtedness of the Issuer in full in money in accordance with its terms, after giving effect to any concurrent payment or distribution to or for the holders of such Senior Indebtedness.

For purposes of this ARTICLE 13, the words, "cash, property or securities" shall not be deemed to include shares of stock of the Issuer as reorganized or readjusted, or securities of the Issuer or any other corporation provided for by a plan of reorganization or readjustment, the payment of which is subordinated at least to the extent provided in this ARTICLE 13 with respect to the Securities to the payment of all Senior Indebtedness of the Issuer which may at the time be outstanding; provided that (i) the Senior Indebtedness of the Issuer is assumed by the new corporation, if any, resulting from any such reorganization or readjustment, and (ii) the rights of the holders of the Senior Indebtedness of the Issuer (other than leases) and of leases which are assumed are not, without the consent of such holders, altered by such reorganization or readjustment. The consolidation of the Issuer with, or the merger of the Issuer into, another corporation or the liquidation or dissolution of the Issuer following the conveyance or transfer of its property as an entirety, or substantially as an entirety, to another corporation upon the terms and conditions provided for in ARTICLE 8 hereof shall not be deemed a dissolution, winding-up, liquidation or reorganization for the purposes of this Section 13.02 if such other corporation shall, as a part of such consolidation, merger, conveyance or transfer, comply with the conditions stated in ARTICLE 8 hereof. Nothing in this Section 13.02 shall apply to claims of, or payments to, the Trustee under or pursuant to Section 5.06.

Section 13.03 *Subrogation Of Securities*. Subject to the payment in full of all Senior Indebtedness of the Issuer, the rights of the holders of the Securities shall be subrogated to the rights of the holders of Senior Indebtedness of the Issuer to receive payments or distributions of cash, property or securities of the Issuer applicable to the Senior Indebtedness of the Issuer until principal (including, if applicable, any cash due upon conversion the Securities), premium, if any, and interest on the Securities on the Securities shall be paid in full; and, for the purposes of such subrogation, no payments or distributions to the holders of the Senior Indebtedness of the Issuer of any cash, property or securities to which the holders of the Securities or the Trustee would be entitled except for the provisions of this ARTICLE 13 to or for the benefit of the holders of Senior Indebtedness of the Issuer by holders of the Securities or the Trustee, shall, as between the Issuer, its creditors other than holders of Senior Indebtedness of the Issuer, and the holders of the Securities, be deemed to be a payment by the Issuer to or on account of the Senior Indebtedness of the Issuer. It is understood that the provisions of this ARTICLE 13 are and are intended solely for the purpose of defining the relative rights of the holders of the Securities, on the one hand, and the holders of the Senior Indebtedness of the Issuer, on the other hand.

Nothing contained in this ARTICLE 13 or elsewhere in this Indenture or in the Securities is intended to or shall impair, as between the Issuer, its creditors other than the holders of its Senior Indebtedness, and the holders of the Securities, the obligation of the Issuer, which is absolute and unconditional, to pay to the holders of the Securities the principal (including, if applicable, any cash due upon conversion the Securities), premium, if any, and interest on the Securities as and when the same shall become due and payable in accordance with their terms, or is intended to or shall affect the relative rights of the holders of the Securities and creditors of the Issuer other than the holders of its Senior Indebtedness, nor shall anything herein or therein prevent the Trustee or the holder of any Security from exercising all remedies otherwise permitted by applicable law upon default under this Indenture, subject to the rights, if any, under this ARTICLE 13 of the holders of Senior Indebtedness of the Issuer in respect of cash, property or securities of the Issuer received upon the exercise of any such remedy.

Upon any payment or distribution of assets of the Issuer referred to in this ARTICLE 13, the Trustee, subject to the provisions of Section 5.01, and the holders of the Securities shall be entitled to rely upon any order or decree made by any court of competent jurisdiction in which such dissolution, winding-up, liquidation or reorganization proceedings are pending, or a certificate of the receiver, trustee in bankruptcy, liquidating trustee, agent or other Person making such payment or distribution, delivered to the Trustee or to the holders of the Securities, for the purpose of ascertaining the Persons entitled to participate in such distribution, the holders of the Senior Indebtedness and other indebtedness of the Issuer, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this ARTICLE 13.

Section 13.04 *Authorization By Holders*. Each holder of a Security by his or her acceptance thereof authorizes and directs the Trustee on his or her behalf to take such action as may be necessary or appropriate to effectuate the subordination provided in this ARTICLE 13 appoints the Trustee his attorney-in-fact for any and all such purposes.

Section 13.05 *Notice to Trustee*. The Issuer shall give promptly written notice to a Responsible Officer of the Trustee of any fact known to the Issuer which would prohibit the making of any payment of monies to or by the Trustee in respect of the Securities pursuant to the provisions of this ARTICLE 13. Notwithstanding the provisions of this ARTICLE 13 or any other provision of this Indenture, the Trustee shall not be charged with knowledge of the existence of any facts which would prohibit the making of any payment of amounts to or by the Trustee in respect of the Securities pursuant to the provisions of this ARTICLE 13, unless and until a Responsible Officer of the Trustee shall have received written notice thereof at the Corporate Trust Office of the Trustee from the Issuer or a holder or holders of Senior Indebtedness or from any trustee thereof; and before the receipt of any such written notice, the Trustee, subject to the provisions of Section 5.01, shall be entitled in all respects to assume that no such facts exist; *provided* that if on a date not fewer than three Business Days prior to the date upon which by the terms hereof any such amounts may become payable for any purpose (including, without limitation, the payment of principal (including, if applicable, any cash due upon conversion of the Securities), premium, if any, and interest on any Security) the Trustee shall not have received, with respect to such monies, the notice provided for in this Section 13.05, then, anything herein contained to the contrary notwithstanding, the Trustee shall have full power and authority to receive such amounts and to apply the same to the purpose for which they were received, and shall not be affected by any notice to the contrary which may be received by it on or after such prior date. Notwithstanding anything to the contrary hereinbefore set forth, nothing shall prevent any payment or delivery by the Issuer or the Trustee to the Holders of amounts in connection with a redemption of Securities if (i) notice of such redemption has been given pursuant to ARTICLE 11 or Section 9.01 hereof prior to the receipt by the Trustee of written notice as aforesaid, and (ii) such notice of redemption is given not earlier than 60 days before the redemption date.

The Trustee conclusively shall be entitled to rely on the delivery to it of a written notice by a Person representing himself to be a holder of Senior Indebtedness of the Issuer (or a trustee on behalf of such holder) to establish that such notice has been given by a holder of Senior Indebtedness of the Issuer or a trustee on behalf of any such holder or holders. In the event that the Trustee determines in good faith that further evidence is required with respect to the right of any Person as a holder of Senior Indebtedness of the Issuer to participate in any payment or distribution pursuant to this ARTICLE 13, the Trustee may request such Person to furnish evidence to the reasonable satisfaction of the Trustee as to the amount of Senior Indebtedness of the Issuer held by such Person, the extent to which such Person is entitled to participate in such payment or distribution and any other facts pertinent to the rights of such Person under this ARTICLE 13, and if such evidence is not furnished the Trustee may defer any payment to such Person pending judicial determination as to the right of such Person to receive such payment.

Section 13.06 *Trustee's Relation to Senior Indebtedness*. The Trustee in its individual capacity shall be entitled to all the rights set forth in this ARTICLE 13 in respect of any Senior Indebtedness of the Issuer at any time held by it, to the same extent as any other holder of Senior Indebtedness of the Issuer and nothing elsewhere in this Indenture shall deprive the Trustee of any of its rights as such holder.

With respect to the holders of Senior Indebtedness of the Issuer, the Trustee undertakes to perform or to observe only such of its covenants and obligations as are specifically set forth in this ARTICLE 13, and no implied covenants or obligations with respect to the holders of Senior Indebtedness of the Issuer shall be read into this Indenture against the Trustee. The Trustee shall not be deemed to owe any fiduciary duty to the holders of Senior Indebtedness of the Issuer and the Trustee shall not be liable to any holder of Senior Indebtedness of the Issuer if it shall pay over or deliver to holders of Securities, the Issuer or any other Person money or assets to which any holder of Senior Indebtedness of the Issuer shall be entitled by virtue of this ARTICLE 13 or otherwise.

Section 13.07 *No Impairment Of Subordination*. No right of any present or future holder of any Senior Indebtedness to enforce subordination as herein provided shall at any time in any way be prejudiced or impaired by any act or failure to act on the part of the Issuer or by any act or failure to act, in good faith, by any such holder, or by any noncompliance by the Issuer with the terms, provisions and covenants of this Indenture, regardless of any knowledge thereof which any such holder may have or otherwise be charged with.

Section 13.08 *Rights Of Trustee*. Nothing in this ARTICLE 13 shall apply to claims of or payments to, the Trustee pursuant to Section 5.06.

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

DERMATA THERAPEUTICS, INC., as Issuer

By: \_\_\_\_\_  
Name:  
Title:  
●, as Trustee

By: \_\_\_\_\_  
Name:  
Title:

**FORM OF NOTE**

UNLESS AND UNTIL IT IS EXCHANGED IN WHOLE OR IN PART FOR SECURITIES IN DEFINITIVE REGISTERED FORM, THIS SECURITY MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY OR BY THE DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR DEPOSITARY. UNLESS THIS SECURITY IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITARY TRUST COMPANY, A NEW YORK CORPORATION (“DTC”), TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY SECURITY ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

**DERMATA THERAPEUTICS, INC.**  
**• % Subordinated Note Due •**

No. • CUSIP No.: •

\$ •

DERMATA THERAPEUTICS, INC., a Delaware corporation (“**Issuer**”, which term includes any successor corporation), for value received promises to pay to CEDE & CO. or its registered assigns, the principal sum of • on •.

Interest Payment Dates: • and • (each, an “**Interest Payment Date**”), commencing on •. Interest Record Dates: • and • (each, an “**Interest Record Date**”).

Reference is made to the further provisions of this Security contained herein, which will for all purposes have the same effect as if set forth at this place.

IN WITNESS WHEREOF, the Issuer has caused this Security to be signed manually or by facsimile by its duly authorized officer.

DERMATA THERAPEUTICS, INC.

By: \_\_\_\_\_  
Name:  
Title:

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

•, as Trustee

By: \_\_\_\_\_  
Authorized Signatory

**(REVERSE OF SECURITY)**  
DERMATA THERAPEUTICS, INC..  
●% Subordinated Note Due ●

1. Interest.

DERMATA THERAPEUTICS, INC., a Delaware corporation (the “**Issuer**”), promises to pay interest on the Principal amount of this Security at the rate per annum shown above. Cash interest on the Securities will accrue from the most recent date to which interest has been paid or, if no interest has been paid, from ●. The Issuer will pay interest semi-annually in arrears on each Interest Payment Date, commencing ●. Interest will be computed on the basis of a 360-day year of twelve 30-day months.

The Issuer shall pay interest on overdue Principal from time to time on demand at the rate borne by the Securities and on overdue installments of interest (without regard to any applicable grace periods) to the extent lawful.

2. Method of Payment.

The Issuer shall pay interest on the Securities (except defaulted interest) to the persons who are the registered Holders at the close of business on the Interest Record Date immediately preceding the Interest Payment Date notwithstanding any transfer or exchange of such Security subsequent to such Interest Record Date and prior to such Interest Payment Date. Holders must surrender Securities to the Trustee to collect Principal payments. The Issuer shall pay Principal and interest in money of the United States that at the time of payment is legal tender for payment of public and private debts (“**U.S. Legal Tender**”). However, the payments of interest, and any portion of the Principal (other than interest payable at maturity or on any redemption or repayment date or the final payment of Principal) shall be made by the Paying Agent, upon receipt from the Issuer of immediately available funds by 11:00 a.m., New York City time (or such other time as may be agreed to between the Issuer and the Paying Agent or the Issuer), directly to a Holder (by Federal funds wire transfer or otherwise) if the Holder has delivered written instructions to the Trustee 15 days prior to such payment date requesting that such payment will be so made and designating the bank account to which such payments shall be so made and in the case of payments of Principal surrenders the same to the Trustee in exchange for a Security or Securities aggregating the same principal amount as the unredeemed Principal amount of the Securities surrendered.

3. Paying Agent.

Initially, ● (the “**Trustee**”) will act as Paying Agent. The Issuer may change any Paying Agent without notice to the Holders.

4. Indenture.

The Issuer issued the Securities under an Indenture, dated as of ● (the “**Indenture**”), between the Issuer and the Trustee. Capitalized terms herein are used as defined in the Indenture unless otherwise defined herein. The terms of the Securities include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939 (15 U.S.C. Sections 77aaa-77bbbb) (the “**TIA**”), as in effect on the date of the Indenture until such time as the Indenture is qualified under the TIA, and thereafter as in effect on the date on which the Indenture is qualified under the TIA. Notwithstanding anything to the contrary herein, the Securities are subject to all such terms, and Holders of Securities are referred to the Indenture and the TIA for a statement of them. To the extent the terms of the Indenture and this Security are inconsistent, the terms of the Indenture shall govern.

5. Subordination.

The indebtedness of the Issuer evidenced by this Security, including the Principal hereof and interest hereon, is, to the extent and in the manner set forth in the Indenture, subordinate and junior in right of payment to the Company’s obligations to holders of Senior Indebtedness of the Issuer and each Holder of this Security, by acceptance hereof, agrees to and shall be bound by such provisions of the Indenture and all other provisions of the Indenture.

6. Denominations; Transfer; Exchange.

The Securities are in registered form, without coupons, in denominations of \$1,000 and multiples of \$1,000. A Holder shall register the transfer of or exchange Securities in accordance with the Indenture. The Issuer may require a Holder, among other things, to furnish appropriate endorsements and transfer documents and to pay certain transfer taxes or similar governmental charges payable in connection therewith as permitted by the Indenture. The Issuer need not issue, authenticate, register the transfer of or exchange any Securities or portions thereof for a period of fifteen (15) days before such series is selected for redemption, nor need the Issuer register the transfer or exchange of any security selected for redemption in whole or in part.

7. Persons Deemed Owners.

The registered Holder of a Security shall be treated as the owner of it for all purposes.

8. Unclaimed Funds.

If funds for the payment of Principal or interest remain unclaimed for two years, the Trustee and the Paying Agent will repay the funds to the Issuer at its written request. After that, all liability of the Trustee and such Paying Agent with respect to such funds shall cease.

9. Legal Defeasance and Covenant Defeasance.

The Issuer may be discharged from its obligations under the Securities and under the Indenture with respect to the Securities except for certain provisions thereof, and may be discharged from obligations to comply with certain covenants contained in the Securities and in the Indenture with respect to the Securities, in each case upon satisfaction of certain conditions specified in the Indenture.

10. Amendment; Supplement; Waiver.

Subject to certain exceptions, the Securities and the provisions of the Indenture relating to the Securities may be amended or supplemented with the written consent of the Holders of at least a majority in aggregate Principal amount of the Securities then outstanding, and any existing Default or Event of Default or compliance with certain provisions may be waived with the consent of the Holders of a majority in aggregate Principal amount of the Securities then outstanding. Without notice to or consent of any Holder, the parties thereto may amend or supplement the Indenture and the Securities to, among other things, cure any ambiguity, defect or inconsistency, provide for uncertificated Securities in addition to or in place of certificated Securities or comply with any requirements of the Commission in connection with the qualification of the Indenture under the Trust Indenture Act, or make any other change that does not adversely affect the rights of any Holder of a Security.

11. Defaults and Remedies.

If an Event of Default (other than certain bankruptcy Events of Default with respect to the Issuer) occurs and is continuing, the Trustee or the Holders of at least 25% in aggregate Principal amount of Securities then outstanding may declare all of the Securities to be due and payable immediately in the manner and with the effect provided in the Indenture. If a bankruptcy Event of Default with respect to the Issuer occurs and is continuing, all the Securities shall be immediately due and payable immediately in the manner and with the effect provided in the Indenture without any notice or other action on the part of the Trustee or any Holder. Holders of Securities may not enforce the Indenture or the Securities except as provided in the Indenture. The Trustee is not obligated to enforce the Indenture or the Securities unless it has received indemnity satisfactory to it. The Indenture permits, subject to certain limitations therein provided, Holders of a majority in aggregate Principal amount of the Securities then outstanding to direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Holders of Securities notice of certain continuing Defaults or Events of Default if it determines that withholding notice is in their interest.

12. Conversion.

Reference is made to the Indenture, including, without limitation, provisions giving the Holder of this Security the right to convert this Security into Capital Stock of the Issuer on the terms and subject to the limitations as more fully specified in the Indenture. The initial conversion rate for this Security is ●. This conversion rate is subject to modification as provided in the Indenture. Such further provisions shall for all purposes have the same effect as though fully set forth at this place.

13. Trustee Dealings with Issuer.

The Trustee under the Indenture, in its individual or any other capacity, may become the owner or pledgee of Securities and may otherwise deal with the Issuer as if it were not the Trustee.

14. No Recourse Against Others.

No stockholder, director, officer, employee or incorporator, as such, of the Issuer or any successor Person thereof shall have any liability for any obligation under the Securities or the Indenture or for any claim based on, in respect of or by reason of, such obligations or their creation. Each Holder of a Security by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issuance of the Securities.

15. Authentication.

This Security shall not be valid until the Trustee manually signs the certificate of authentication on this Security.

16. Abbreviations and Defined Terms.

Customary abbreviations may be used in the name of a Holder of a Security or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian), and U/G/M/A (= Uniform Gifts to Minors Act).

17. CUSIP Numbers.

Pursuant to a recommendation promulgated by the Committee on Uniform Security Identification Procedures, the Issuer has caused CUSIP numbers to be printed on the Securities as a convenience to the Holders of the Securities. No representation is made as to the accuracy of such numbers as printed on the Securities and reliance may be placed only on the other identification numbers printed hereon.

18. Governing Law.

The laws of the State of New York shall govern the Indenture and this Security thereof.

**ASSIGNMENT FORM**

I or we assign and transfer this Security to

\_\_\_\_\_

(Print or type name, address and zip code of assignee or transferee)

\_\_\_\_\_

(Insert Social Security or other identifying number of assignee or transferee)

and irrevocably appoint agent to transfer this Security on the books of the Issuer. The agent may substitute another to act for him.

Dated: \_\_\_\_\_ Signed: (Signed exactly as name appears on the other side of this Security)

Signature Guarantee: \_\_\_\_\_

Participant in a recognized Signature Guarantee Medallion Program (or other signature guarantor program reasonably acceptable to the Trustee)



November 21, 2025

Dermata Therapeutics, Inc.  
3525 Del Mar Heights, Rd., #322  
San Diego, CA 92130

Re: Shelf Registration on Form S-3

Ladies and Gentlemen:

This opinion is being furnished to you in connection with the Registration Statement on Form S-3 (the "Registration Statement"), including the base prospectus that is part of the Registration Statement (the "Prospectus"), filed by Dermata Therapeutics, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") on November 21, 2025 under the Securities Act of 1933, as amended (the "Securities Act").

The Prospectus provides that it will be supplemented in the future by one or more prospectus supplements (each, a "Prospectus Supplement"). The Prospectus, as supplemented by the various Prospectus Supplements, will provide for the issuance and sale by the Company from time to time of up to \$100 million aggregate offering price of (i) shares of the Company's common stock, par value \$0.0001 per share (the "Common Stock"), (ii) shares of the Company's preferred stock, par value \$0.0001 per share (the "Preferred Stock"), in one or more series or classes, (iii) warrants to purchase shares of Common Stock or Preferred Stock (the "Warrants"), (iv) the Company's senior debt securities and subordinated debt securities (collectively, the "Debt Securities"), which may be issued pursuant to a senior debt indenture (the "Senior Debt Indenture") between the Company and the trustee to be named therein (the "Senior Debt Trustee") and a subordinated debt indenture (the "Subordinated Debt Indenture," and together with the Senior Debt Indenture, the "Indentures") between the Company and the trustee to be named therein (the "Subordinated Debt Trustee" and, together with the Senior Debt Trustee, the "Trustees"), (v) subscription rights to purchase Common Stock or Debt Securities (the "Subscription Rights") or (vi) units composed of any of the foregoing (the "Units"). The Common Stock, Preferred Stock, Warrants, Debt Securities, Subscription Rights and Units are collectively referred to herein as the "Securities." The Warrants may be issued pursuant to a warrant agreement (the "Warrant Agreement") between the Company and a bank or trust company as warrant agent. Any Preferred Stock may be exchangeable for and/or convertible into shares of Common Stock or another series of Preferred Stock. Any Debt Securities may be exchangeable and/or convertible into shares of Common Stock or Preferred Stock. The Units may be issued pursuant to a Unit Agreement (the "Unit Agreement") between the Company and a bank or trust company as unit agent. The Securities are being registered for offering and sale from time to time pursuant to Rule 415 under the Securities Act.

In rendering our opinions set forth below, we have reviewed the Registration Statement and the exhibits thereto. We have also reviewed such corporate documents and records of the Company, such certificates of public officials and officers of the Company and such other matters as we have deemed necessary or appropriate for purposes of this opinion. In our examination, we have assumed: (i) the authenticity of original documents and the genuineness of all signatures; (ii) the conformity to the originals of all documents submitted to us as copies; (iii) the truth, accuracy and completeness of the information, representations and warranties contained in the instruments, documents, certificates and records we have reviewed; and (iv) the legal capacity for all purposes relevant hereto of all natural persons and, with respect to all parties to agreements or instruments relevant hereto other than the Company, that such parties had the requisite power and authority (corporate or otherwise) to execute, deliver and perform such agreements or instruments, that such agreements or instruments have been duly authorized by all requisite action (corporate or otherwise), executed and delivered by such parties and that such agreements or instruments are the valid, binding and enforceable obligations of such parties. As to any facts material to the opinions expressed herein that were not independently established or verified, we have relied upon oral or written statements and representations of officers and other representatives of the Company.

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NEW YORK

PALO ALTO

NEW JERSEY

UTAH

WASHINGTON, D.C.

Lowenstein Sandler LLP

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Based on the foregoing, and subject to the assumptions, limitations and qualifications set forth herein, we are of the opinion that:

1. With respect to shares of Common Stock, when (a) the issuance and the terms of the sale of the shares of Common Stock have been duly authorized by the Board of Directors of the Company or a duly authorized committee thereof in conformity with the Company's amended and restated certificate of incorporation and amended and restated bylaws; (b) such shares have been issued and delivered against payment of the purchase price therefor in an amount at least equal to the par value thereof, in accordance with the applicable definitive purchase, underwriting or similar agreement, and as contemplated by the Registration Statement, the Prospectus and the related Prospectus Supplement; and (c) to the extent such shares of Common Stock are to be issued upon the conversion, exchange or exercise of any Preferred Stock, Warrants, Debt Securities, Subscription Rights or Units, when such shares have been duly issued and delivered as contemplated by the terms of the applicable Preferred Stock, the Warrant Agreement relating to such Warrants, the Indenture relating to such Debt Securities, such Subscription Rights or the Unit Agreement relating to such Units, respectively, the shares of Common Stock will be validly issued, fully paid and nonassessable.

2. With respect to any particular series of shares of Preferred Stock, when (a) the issuance and the terms of the sale of the shares of Preferred Stock have been duly authorized by the Board of Directors of the Company or a duly authorized committee thereof in conformity with the Company's amended and restated certificate of incorporation and amended and restated bylaws; (b) an appropriate certificate of designation relating to a series of the Preferred Stock to be sold under the Registration Statement has been duly authorized and adopted and filed with the Secretary of State of Delaware; (c) the terms of issuance and sale of shares of such series of Preferred Stock have been duly established in conformity with the Company's amended and restated certificate of incorporation, amended and restated bylaws and any resolutions adopted by the Board of Directors of the Company so as not to violate such resolutions of the Board of Directors of the Company or any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company and comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company or any of its property; (d) such shares have been issued and delivered against payment of the purchase price therefor in an amount at least equal to the par value thereof, in accordance with the applicable definitive purchase, underwriting or similar agreement, and as contemplated by the Registration Statement, the Prospectus and the related Prospectus Supplement; and (e) to the extent such shares of Preferred Stock are to be issued upon the conversion, exchange or exercise of any Preferred Stock, Warrants, Debt Securities, Subscription Rights or Units, when such shares have been duly issued and delivered as contemplated by the terms of the applicable Preferred Stock, the Warrant Agreement relating to such Warrants, the Indenture relating to such Debt Securities, such Subscription Rights, or the Unit Agreement relating to such Units, respectively, the shares of Preferred Stock will be validly issued, fully paid and nonassessable.

3. With respect to Warrants, when (a) the issuance and the terms of the sale of the Warrants have been duly authorized by the Board of Directors of the Company or a duly authorized committee thereof; (b) the terms of the Warrants and of their issuance and sale have been duly established in conformity with the Company's amended and restated certificate of incorporation, amended and restated bylaws and any resolutions adopted by the Board of Directors of the Company so as not to violate such resolutions of the Board of Directors of the Company or any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company and comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company or any of its property; (c) the Warrants and the applicable Warrant Agreement relating to the Warrants, if any, have been duly executed and countersigned and the Warrants have been issued and sold in accordance with the applicable definitive purchase, underwriting or similar agreement, as contemplated by the Registration Statement, the Prospectus and the related Prospectus Supplement; and (d) the Company has received the applicable consideration for the Warrants as contemplated by the Registration Statement, the Prospectus and the related Prospectus Supplement(s), the Warrants will constitute valid and binding obligations of the Company.

4. With respect to Debt Securities, when (a) the issuance and the terms of the sale of the Debt Securities have been duly authorized by the Board of Directors of the Company or a duly authorized committee thereof; (b) the terms of the Debt Securities and of their issuance and sale have been duly established in conformity with any resolutions adopted by the Board of Directors of the Company so as not to violate such resolutions of the Board of Directors of the Company or any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company and comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company or any of its property; (c) the Debt Securities and the applicable Indenture relating to the Debt Securities have been duly executed and countersigned and in the case of the Indenture, duly authenticated by the Trustee, and the Debt Securities have been issued and sold as contemplated by the Registration Statement, the Prospectus and the related Prospectus Supplement; and (d) the Company has received the applicable consideration for the Debt Securities as contemplated by the Registration Statement, the Prospectus and the related Prospectus Supplement(s), the Debt Securities will constitute valid and binding obligations of the Company.

5. With respect to the Subscription Rights, when both: (a) the issuance and the terms of the sale of the Subscription Rights have been duly authorized by the Board of Directors of the Company or a duly authorized committee thereof; (b) the terms of the Subscription Rights and of their issuance and sale have been duly established in conformity with any resolutions adopted by the Board of Directors of the Company so as not to violate such resolutions of the Board of Directors of the Company or any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company and comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company or any of its property; and (c) the agreement(s) relating to the Subscription Rights have been duly authorized and validly executed and delivered by the Company, then the Subscription Rights will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

6. With respect to Units, when (a) the issuance and the terms of the sale of the Units have been duly authorized by the Board of Directors of the Company or a duly authorized committee thereof; (b) the terms of the Units and of their issuance and sale have been duly established in conformity with any resolutions adopted by the Board of Directors of the Company so as not to violate such resolutions of the Board of Directors of the Company or any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company and comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company or any of its property; (c) the Unit Agreement and the Units, if any, have been duly executed and countersigned and the Units have been issued and sold in accordance with the applicable Unit Agreement, as contemplated by the Registration Statement, the Prospectus and the related Prospectus Supplement; and (d) the Company has received the applicable consideration for the Units as contemplated by the Registration Statement, the Prospectus and the related Prospectus Supplement(s), the Units will constitute valid and binding obligations of the Company.

In rendering the opinions set forth above, we have assumed that (i) the Registration Statement (and any applicable post-effective amendment thereto) will have become effective under the Securities Act, a Prospectus Supplement will have been prepared and filed with the Commission describing the Securities offered thereby and such Securities will have been issued and sold in accordance with the terms of such Prospectus Supplement and in compliance with all applicable laws; and (ii) a definitive purchase, underwriting or similar agreement with respect to such Securities (if applicable) will have been duly authorized, executed and delivered by the Company and the other parties thereto; (iii) the Securities will be duly authorized by all necessary corporate action by the Company and any agreement pursuant to which such Securities may be issued will be duly authorized, executed and delivered by the Company and the other parties thereto; (iv) the Company will remain duly organized, validly existing and in good standing under applicable state law; and (v) the Company has reserved a sufficient number of shares of its duly authorized, but unissued, Common Stock and Preferred Stock as is necessary to provide for the issuance of the shares of Common Stock and Preferred Stock pursuant to the Registration Statement, the Prospectus and the related Prospectus Supplement.

The opinions set forth above are subject to the following exceptions, limitations and qualifications: (i) the effect of bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other similar laws now or hereafter in effect relating to or affecting the rights and remedies of creditors; (ii) the effect of general principles of equity, including without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance or injunctive relief, regardless of whether enforcement is considered in a proceeding in equity or at law, and the discretion of the court before which any proceeding therefor may be brought; and (iii) the unenforceability under certain circumstances under law or court decisions of provisions providing for the indemnification of, or contribution to, a party with respect to liability where such indemnification or contribution is contrary to public policy. We express no opinion concerning the enforceability of any waiver of rights or defenses with respect to stay, extension or usury laws. Our opinion expressed herein is also subject to the qualification that no term or provision shall be included in any certificate of designation relating to any series of the Preferred Stock, Warrant Agreement, Indenture, Subscription Rights, Unit Agreement or any other agreement or instrument pursuant to which any of the Securities are to be issued that would affect the validity of such opinion.

Our opinion is limited to the federal laws of the United States, the General Corporation Law of the State of Delaware (including reported judicial decisions interpreting the General Corporation Law of the State of Delaware) and the State of New York. We express no opinion as to the effect of the law of any other jurisdiction. Our opinion is rendered as of the date hereof, and we assume no obligation to advise you of changes in law or fact (or the effect thereof on the opinions expressed herein) that hereafter may come to our attention.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm therein and in the Prospectus and in any Prospectus Supplement under the caption "Legal Matters." In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

*/s/ Lowenstein Sandler LLP*

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**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in this Registration Statement on Form S-3 of Dermata Therapeutics, Inc. of our report dated March 17, 2025, relating to the financial statements of Dermata Therapeutics, Inc. (the “Company”) (which report expresses an unqualified opinion and includes an explanatory paragraph relating to a going concern uncertainty), appearing in the Annual Report on Form 10-K of the Company for the year ended December 31, 2024, filed with the Securities and Exchange Commission. We also consent to the reference to us under the heading “Experts” in such Registration Statement.

/s/ Baker Tilly US, LLP

San Diego, California  
November 21, 2025

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## Calculation of Filing Fee Table

S-3  
(Form Type)Dermata Therapeutics, Inc.  
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial effective date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
<b>Newly Registered Securities</b>												
Fees to Be Paid	Equity	Common Stock, par value \$0.0001 per share	—	—	—	—	—	—	—	—	—	—
	Equity	Preferred Stock, par value \$0.0001 per share	—	—	—	—	—	—	—	—	—	—
	Other	Warrants	—	—	—	—	—	—	—	—	—	—
	Other	Debt Securities	—	—	—	—	—	—	—	—	—	—
	Other	Subscription Rights	—	—	—	—	—	—	—	—	—	—
	Other	Units	—	—	—	—	—	—	—	—	—	—
	Total	Unallocated (Universal) Shelf	Rule 457(o)	(1)	(2)	\$ 3,492,112	0.0001381	\$ 483.00	—	—	—	—
<b>Carry Forward Securities</b>												
Carry Forward Securities	Equity	Common Stock, par value \$0.0001 per share	—	—	—	—	—	—	—	—	—	—
	Equity	Preferred Stock, par value \$0.0001 per share	—	—	—	—	—	—	—	—	—	—
	Other	Warrants	—	—	—	—	—	—	—	—	—	—
	Other	Units	—	—	—	—	—	—	—	—	—	—
	Total	Unallocated (Universal) Shelf	Rule 415(a) (6)	(3)		\$ 96,507,888 <sup>(3)</sup>	—	—	S-3	333-268383	November 25, 2022	\$ 10,635.00 <sup>(3)</sup>
	<b>Total Offering Amounts</b>					\$ 100,000,000		\$ 483.00				
	<b>Total Fees Previously Paid</b>							—				
	<b>Total Fee Offsets</b>							—				
	<b>Net Fee Due</b>							\$ 483.00				

(1) The amount to be registered consists of up to \$100,000,000 of an indeterminate amount of common stock, preferred stock, debt securities, warrants, subscription rights and/or units. There is also being registered hereunder such currently indeterminate number of (i) shares of common stock or other securities of the registrant as may be issued upon conversion of, or in exchange for, convertible or exchangeable debt securities and/or preferred stock registered hereby, or (ii) shares of preferred stock, common stock, debt securities, subscription rights or units as may be issued upon exercise of warrants registered hereby, as the case may be. Any securities registered hereunder may be sold separately or as units with the other securities registered hereunder. The securities registered hereunder also include an indeterminate number of securities as may be issued pursuant to anti-dilution provisions of any of such securities. In addition, pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers any additional securities that may be offered or issued in connection with any stock splits, stock dividends or similar transactions.

(2) The proposed maximum aggregate offering price per share 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 Instruction 2.A.ii.b. to Item 16(b) of Form S-3 under the Securities Act.

(3) The Registrant previously filed a Registration Statement on Form S-3 with the Securities and Exchange Commission (the "SEC") on November 15, 2022 (File No. 333-268383) (the "Prior Registration Statement"), which was declared effective on November 25, 2022, that registered \$100,000,000 of securities to be offered by the Registrant from time to time. Pursuant to Rule 415(a)(6) under the Securities Act, this Registration Statement includes \$96,507,888 of unsold securities (the "Unsold

Securities”) that were previously registered on the Prior Registration Statement. In connection with the registration of the Unsold Securities on the Prior Registration Statement, the Registrant paid a filing fee of \$11,020.00 (calculated at the filing fee rate in effect at the time of the filing of the Prior Registration Statement). The Registrant is not required to pay any additional fee with respect to the Unsold Securities being included in this Registration Statement in reliance on Rule 415(a)(6), because such Unsold Securities (and associated fees) are being moved from the Prior Registration Statement to this Registration Statement. Accordingly, the Amount of Registration Fee in the table above reflects only the registration fee attributable to the \$3,492,112 of new securities registered on this Registration Statement. The registration fee previously paid by the Registrant relating to the Unsold Securities included on this Registration Statement will continue to be applied to such Unsold Securities. During the grace period afforded by Rule 415(a)(5) under the Securities Act, the Registrant may continue to offer and sell under the Prior Registration Statement the Unsold Securities being registered hereunder. To the extent that, after the filing date hereof and prior to the effectiveness of this Registration Statement, the Registrant sells any such Unsold Securities pursuant to the Prior Registration Statement, the Registrant will identify in a pre-effective amendment to this Registration Statement the updated amount of Unsold Securities from the Prior Registration Statement to be included in this Registration Statement pursuant to Rule 415(a)(6). Pursuant to Rule 415(a)(6), the offering of the Unsold Securities under the Prior Registration Statement will be deemed terminated as of the date of effectiveness of this Registration Statement.

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