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

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

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**IKENA ONCOLOGY, INC.**  
(Exact name of registrant as specified in its charter)

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

**81-1697316**  
(I.R.S. Employer  
Identification Number)

**Ikena Oncology, Inc.**  
**645 Summer Street, Suite 101**  
**Boston, MA 02210**  
**(857) 273-8343**  
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

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**Mark Manfredi, Ph.D.**  
**President and Chief Executive Officer**  
**Ikena Oncology, Inc.**  
**645 Summer Street, Suite 101**  
**Boston, MA 02210**  
**(857) 273-8343**  
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

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*Copy to:*

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**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. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

**The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, 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 contains two prospectuses:

- a base prospectus that covers the offering, issuance and sale by us of up to \$300,000,000 of our debt securities, common stock, preferred stock, units and/or warrants; and
- a sale agreement prospectus that covers the offer and sale by us of shares of our common stock having an aggregate offering price of up to \$100,000,000 from time to time under a sale agreement with Jefferies LLC.

The base prospectus immediately follows this explanatory note. The specific terms of any securities to be offered pursuant to the base prospectus will be specified in a prospectus supplement to the base prospectus. The up to \$100,000,000 of common stock that may be offered, issued and sold from time to time under the sale agreement prospectus is included in the \$300,000,000 of securities that may be offered, issued and sold by us under the base prospectus. Upon termination of the sale agreement with Jefferies LLC, any portion of the \$100,000,000 included in the sale agreement prospectus that is not sold pursuant to the sale agreement will be available for sale in other offerings pursuant to the base prospectus and a corresponding prospectus supplement, and if no shares are sold under the sale agreement, the full \$300,000,000 of securities may be sold in other offerings pursuant to the base prospectus and a corresponding prospectus supplement.

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

Subject to completion, dated April 27, 2022

PROSPECTUS



**\$300,000,000**

## **IKENA ONCOLOGY, INC.**

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

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We may from time to time issue, in one or more series or classes, up to \$300,000,000 in aggregate principal amount of our common stock, preferred stock, debt securities, warrants and/or units, in any combination, together or separately, in one or more offerings in amounts, at prices and on the terms that we will determine at the time of the offering and which will be set forth in a prospectus supplement to this prospectus and any related free writing prospectus.

We may offer these securities separately or together in units. Each time we sell securities described herein, we will provide prospective investors with a supplement to this prospectus that will specify the terms of the securities being offered. We may sell these securities to or through underwriters or dealers and also to other purchasers or through agents. We will set forth the names of any underwriters or agents, and any fees, conversions, or discount arrangements, in the applicable prospectus supplement. We may not sell any securities under this prospectus without delivery of the applicable prospectus supplement. You should read this document and any prospectus supplement or amendment carefully before you invest in our securities.

Our common stock is listed on The Nasdaq Global Market under the symbol "IKNA." On April 25, 2022, the closing price for our common stock, as reported on The Nasdaq Global Select Market, was \$5.88 per share. Our principal executive offices are located at 645 Summer Street, Suite 101, Boston, MA 02210.

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**Investing in these securities involves certain risks. See "[Risk Factors](#)" on page 2 of this prospectus as well as those included in any accompanying prospectus supplement and in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase these securities.**

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

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The date of this prospectus is \_\_\_\_\_, 2022.

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the “SEC,” utilizing a “shelf” registration process. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings for an aggregate initial offering price of up to \$300,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide one or more prospectus supplements that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus. This prospectus, together with any accompanying prospectus supplement, contains important information you should know before investing in our securities, including important information about us and the securities being offered. You should read both this prospectus and the accompanying prospectus supplement together with the additional information described under the headings “Where You Can Find More Information” and “Incorporation by Reference” beginning on page 27 of this prospectus.

You should rely only on the information contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We have not authorized anyone to provide you with different information. This prospectus and the accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in the accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates. This prospectus, any applicable prospectus supplement and the information incorporated herein or therein by reference contains market data, industry statistics and other data that have been obtained or compiled from information made available by independent third parties. We have not independently verified the accuracy and completeness of such data.

### **THIS PROSPECTUS MAY NOT BE USED TO OFFER AND SELL SECURITIES UNLESS IT IS ACCOMPANIED BY AN ADDITIONAL PROSPECTUS OR A PROSPECTUS SUPPLEMENT.**

As used in this prospectus, unless the context otherwise requires, references to the “Ikena,” “company,” “we,” “us” and “our” refer to Ikena Oncology, Inc. and, where appropriate, our subsidiaries.

We own various U.S. federal trademark applications and unregistered trademarks, including our company name. All other trademarks or trade names referred to in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the symbols ® and ™, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

## **RISK FACTORS**

Investing in our securities involves a high degree of risk. You should carefully consider the risks set forth in our filings with the SEC that are incorporated by reference herein and any prospectus supplement, as well as other information we include or incorporate by reference into this prospectus and any applicable prospectus supplement, before making an investment decision. Our business, financial condition or results of operations could be materially adversely affected by the materialization of any of these risks. The trading price of our securities could decline due to the materialization of any of these risks, and you may lose all or part of your investment. This prospectus and the documents incorporated herein by reference also contain forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks described in the documents incorporated herein by reference, including our most recent Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K and the other documents we file with the SEC that are deemed incorporated by reference into this prospectus.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Forward-looking statements relate to, among others, our plans, objectives and expectations for our business, operations and financial performance and condition, and can be identified by terminology such as “may,” “will,” “could,” “should,” “expect,” “intend,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” “project,” “seek,” “endeavor,” “target,” “continue” and similar expressions that do not relate solely to historical matters. Forward-looking statements are based on management’s belief and assumptions and on information currently available to management. Although we believe that the expectations reflected in forward-looking statements are reasonable, such statements involve known and unknown risks, uncertainties and other 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 forward-looking statements.

Forward-looking statements include, but are not limited to, statements about:

- the initiation, timing, progress, results, and cost of our research and development programs and our current and future preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our research and development programs;
- our ability to efficiently discover and develop product candidates;
- our ability and the potential to successfully manufacture our drug substances and product candidates for preclinical use, for clinical trials, and on a larger scale, for commercial use, if approved;
- the ability and willingness of our third-party strategic collaborators to continue research and development activities relating to our development candidates and product candidates;
- our ability to obtain funding for our operations necessary to complete further development and commercialization of our product candidates;
- our ability to obtain and maintain regulatory approval of our product candidates;
- our ability to commercialize our products, if approved;
- the pricing and reimbursement of our product candidates, if approved;
- the implementation of our business model, and strategic plans for our business and product candidates;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates;
- estimates of our future expenses, revenue, capital requirements, and our needs for additional financing;
- the potential benefits of strategic collaboration agreements, our ability to enter into strategic collaborations or arrangements, and our ability to attract collaborators with development, regulatory and commercialization expertise;
- future agreements with third parties in connection with the commercialization of product candidates and any other approved product;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- our financial performance;
- the rate and degree of market acceptance of our product candidates;
- regulatory developments in the United States and relevant foreign countries;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- our ability to produce our products or product candidates with advantages in turnaround times or manufacturing cost;
- the success of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel;
- the impact of laws and regulations;
- our use of proceeds from our initial public offering;
- developments relating to our competitors and our industry;
- the effect of the ongoing COVID-19 pandemic, including mitigation efforts and economic effects, on any of the foregoing or other aspects of our business operations, including but not limited to our preclinical studies and clinical trials and any future studies or trials; and



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- other risks and uncertainties, including those under the caption “Risk Factors.”

The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

We may from time-to-time provide estimates, projections and other information concerning our industry, our business and the markets for our programs and product candidates. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market, and other data from our own internal estimates and research as well as from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. While we are not aware of any misstatements regarding any third-party information presented in this prospectus, their estimates, in particular, as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties and are subject to change based on various factors. You should read this prospectus, any applicable prospectus supplement and any related free writing prospectus and the documents that we reference therein and have filed with the SEC as exhibits thereto completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements. These estimates involve numerous assumptions, are subject to risks and uncertainties and are subject to change based on various factors, including those discussed under “Item 1A: Risk Factors” and elsewhere in our most recent Annual Report on Form 10-K, our subsequent Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K, and the section of any accompanying prospectus supplement entitled “Risk Factors.”

## OUR COMPANY

### Overview

We are a targeted oncology company developing precision medicines tailored to biomarker-defined patient groups with specific unmet needs. With our robust biomarker and translational approach we aim to develop targeted cancer therapies and define patient populations who are most likely to respond to treatment. Our current programs are across the Hippo pathway, RAS pathway, and key immune signals in the tumor-microenvironment, or TME, with approaches to targeting both cancer driving targets and mechanisms of resistance to targeted therapies. Our focus on patient-driven development is platform and process agnostic, allowing us to research both known and novel targets, with a shared guiding principle of aiming to address the unmet needs of biomarker-defined patient populations. Since we commenced operations in 2016, we have advanced multiple product candidates into clinical development. In addition, we have a robust pipeline of discovery-stage targeted oncology programs.

Our lead targeted oncology product candidate, IK-930, is an oral small molecule inhibitor of the transcriptional enhanced associate domain, or TEAD, transcription factor in the Hippo signaling pathway. The Hippo pathway is genetically altered in approximately 10% of human cancers and is widely accepted as a prevalent driver of cancer pathogenesis and a mediator of poor outcomes for patients. In our ongoing first-in-human clinical trial, we are focusing on indications that provide the potential for rapid clinical development to achieve proof-of-concept, such as NF2 deficient mesothelioma and solid tumors with YAP1 or TAZ gene fusions, including epithelioid hemangioendothelioma, in which 100% of patients have Hippo pathway alterations. We also plan to assess IK-930 in combination with other targeted therapies across several indications, including EGFR mutated non-small cell lung cancer and KRAS mutated cancers. In October 2021, our Investigational New Drug Application, or IND, for IK-930 was accepted by the U.S. Food and Drug Administration and we subsequently initiated a first-in-human Phase 1 clinical trial to evaluate the safety, tolerability, pharmacokinetics, pharmacodynamics, and preliminary antitumor activity of IK-930 in patients with advanced solid tumors with or without gene alterations in the Hippo pathway. The first patient was dosed in January 2022.

Our discovery efforts are focused on additional targeted oncology programs, following our philosophy of designing treatments for patient populations identified through the genetic make-up of their tumors. Our pre-clinical pipeline is growing to include additional Hippo pathway and RAS pathway-targeting programs, including our program against the novel target extracellular signal related kinase 5. We are generating mechanistic and translational data to identify underserved RAS-mutated cancer patient populations and assess approaches that could benefit them.

Our clinical-stage programs also include product candidates in development to target immune signaling in the TME. These programs are all built on the same foundation of biomarker-driven clinical trial design and patient enrichment, aiming to develop therapies that can precisely be used for specific cancer patients. IK-175 is an oral inhibitor of aryl hydrocarbon receptor, which we are evaluating in a Phase 1a/1b clinical trial, as monotherapy and in combination with nivolumab, in patients with advanced or metastatic solid tumors, including urothelial carcinomas, for which current standard-of-care therapy is no longer effective or is intolerable. We expect to report initial clinical data from this trial in the second half of 2022. Additionally, we plan to initiate a second Phase 1b clinical trial to evaluate IK-175 in patients with head and neck squamous cell carcinoma in the second half of 2022. The IK-175 program is being developed in partnership with Bristol-Myers Squibb Company.

Also within TME immune signaling, IK-007, which is designed to inhibit the prostaglandin E receptor 4 in the COX2 pathway, is being evaluated in a Phase 1b clinical trial in combination with pembrolizumab for the treatment of patients with advanced or progressive microsatellite stable colorectal cancer for which first and second line standard therapy (at least one of which contained fluorouracil) is no longer effective or is intolerable. We recently completed enrollment in this trial and expect to report data at a medical conference in the second half of 2022.

### Corporate History

We were incorporated under the laws of the State of Delaware in February 2016. We are the successor in interest to KYN Therapeutics L.L.C., a limited liability company formed under the laws of the State of Texas in September 2014. In December 2019, we changed our name from Kyn Therapeutics, Inc. to Ikena Oncology, Inc. Our principal corporate office is located at 645 Summer Street, Suite 101, Boston, MA 02210, and our telephone number is (857) 273-8343. Our website address is [www.ikenaoncology.com](http://www.ikenaoncology.com). We do not incorporate the information on or accessible through our website into this prospectus, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus.

### **Implications of Being an Emerging Growth Company and a Smaller Reporting Company**

We qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, as amended. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

- being permitted to only disclose two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;
- reduced disclosure about our executive compensation arrangements;
- not being required to hold advisory votes on executive compensation or to obtain stockholder approval of any golden parachute arrangements not previously approved; and
- an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We may take advantage of these exemptions until the fifth anniversary of our initial public offering or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company on the date that is the earliest of (i) the last day of the fiscal year in which we have total annual gross revenue of \$1.07 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years; or (iv) the last day of the fiscal year in which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, or SEC, which means the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the prior June 30th. We may choose to take advantage of some but not all of these exemptions. We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock. We are in the process of evaluating the benefits of relying on other exemptions and reduced reporting requirements under the JOBS Act. Subject to certain conditions, as an emerging growth company, we may rely on certain of these exemptions, including without limitation, providing an auditor’s attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act.

We are also a “smaller reporting company” as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies until the fiscal year following the determination that our voting and non-voting common stock held by non-affiliates is more than \$250 million measured on the last business day of our second fiscal quarter, or our annual revenues are less than \$100 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is more than \$700 million measured on the last business day of our second fiscal quarter.

## USE OF PROCEEDS

We currently intend to use the net proceeds from this offering primarily to fund the research and development of our product candidates. This may include acquisitions or investments in businesses, products or technologies that are complementary to our own, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus, and for working capital and general corporate purposes. Pending these uses, we may invest the net proceeds from this offering in short-term U.S. Treasury securities with insignificant rates of return, or may hold such proceeds as cash, until they are used for their stated purpose. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of net proceeds.

## **SECURITIES THAT MAY BE OFFERED**

This prospectus contains summary descriptions of the securities we may offer from time to time. These summary descriptions are not meant to be complete descriptions of each security. The particular terms of any security will be described in the applicable prospectus supplement. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities described herein, we will provide prospective investors with a supplement to this prospectus that will contain specific information about the terms of that offering, including the specific amounts, prices and terms of the securities offered.

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

## DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is intended as a summary only and therefore is not a complete description of our capital stock. This description is based upon, and is qualified by reference to, our certificate of incorporation, our bylaws, and applicable provisions of Delaware corporate law. You should read our certificate of incorporation and our bylaws, in each case, as amended and supplemented, which are filed as exhibits to the registration statement of which this prospectus forms a part, for the provisions that are important to you.

### General

Our authorized capital stock consists of 150,000,000 shares of common stock, par value \$0.001 per share, including 8,000,000 shares of non-voting common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share, all of which are undesignated. The following description of our capital stock and provisions of our certificate of incorporation and bylaws are summaries and are qualified by reference to our certificate of incorporation and our bylaws, in each case, as amended and supplemented.

### Common Stock and Non-Voting Common Stock

As of December 31, 2021, we had outstanding 35,975,034 shares of common stock, held of record by 33 stockholders.

The holders of our common stock and non-voting common stock have identical rights subject to two exceptions. First, except as otherwise expressly provided in our fifth amended and restated certificate of incorporation or as required by applicable law, on any matter that is submitted to a vote by our stockholders, holders of our common stock are entitled to one vote per share of common stock, and holders of our non-voting common stock are not entitled to any votes per share of non-voting common stock, including for the election of directors. Second, holders of our common stock have no conversion rights, while holders of our non-voting common stock shall have the right to convert each share of our non-voting common stock into one share of common stock at such holder's election, provided that as a result of such conversion, such holder, together with its affiliates and any members of a Schedule 13(d) group with such holder, would not beneficially own in excess of 9.99% of our common stock immediately prior to and following such conversion, unless otherwise expressly provided for in our amended and restated certificate of incorporation. However, this ownership limitation may be increased or decreased to any other percentage designated by such holder of non-voting common stock upon 61 days' notice to us.

Except as otherwise provided by law, our fifth amended and restated certificate of incorporation or our bylaws, in all matters other than the election of directors, the affirmative vote of the majority of the shares present in person or represented by proxy at a meeting at which a quorum is present and entitled to vote on the subject matter shall be the act of the stockholders. Directors shall be elected by a plurality of the shares present in person or represented by proxy at a meeting at which a quorum is present and entitled to vote on the election of directors.

Holders of our common stock and non-voting common stock are entitled to receive ratably any dividends declared by our board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock and non-voting common stock have no preemptive rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock and non-voting common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock. Holders of shares of our common stock and non-voting common stock are not required to make additional capital contributions. The shares to be issued by us in this offering will be, when issued and paid for, validly issued, fully paid and non-assessable.

### Preferred Stock

As of December 31, 2021, no shares of our preferred stock were issued and outstanding.

Our board of directors will have the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof.

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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, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our Company or other corporate action.

### **Registration Rights**

Certain holders of our common stock are entitled to rights with respect to the registration of these securities under the Securities Act. These rights are provided under the terms of an investor rights agreement between us and certain holders of our common stock (the “Investor Rights Agreement Parties”). The investor rights agreement includes demand registration rights, short-form registration rights, and piggyback registration rights. All fees, costs and expenses of underwritten registrations under this agreement will be borne by us and all selling expenses, including underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

#### ***Demand registration rights***

Certain holders of our common stock are entitled to demand registration rights. Under the terms of the investor rights agreement, we will be required, upon the written request of a majority of holders of the registrable securities then outstanding that would result in an aggregate offering price of at least \$10.0 million, to file a registration statement and to use commercially reasonable efforts to effect the registration of all or a portion of these shares for public resale.

#### ***Short-form registration rights***

Certain holders of our common stock are also entitled to short-form registration rights. Pursuant to the investor rights agreement, if we are eligible to file a registration statement on Form S-3, upon the written request of at least 20% in interest of these holders to sell registrable securities at an aggregate price of at least \$3.0 million, we will be required to use commercially reasonable efforts to effect a registration of such shares. We are required to effect only two registrations in any twelve-month period pursuant to this provision of the investor rights agreement.

#### ***Piggyback registration rights***

Pursuant to the investor rights agreement, if we register any of our securities either for our own account or for the account of other security holders, certain holders of our common stock are entitled to include their shares in the registration. Subject to certain exceptions contained in the Investor Rights Agreement, we and the underwriters may limit the number of shares included in the underwritten offering to the number of shares which we and the underwriters determine in our sole discretion will not jeopardize the success of the offering.

### ***Indemnification***

Our investor rights agreement contains customary cross-indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

### ***Expiration of registration rights***

The demand registration rights and short-form registration rights granted under the Investor Rights Agreement will terminate on the earlier of (i) the fifth anniversary of the completion of our initial public offering and (ii) such time following our initial public offering as Rule 144 promulgated under the Securities Act or another similar exemption under the Securities Act is available for the sale of all of the Investors Rights Agreement Parties’ shares without limitation during a three-month period without registration.

### **Anti-takeover effects of our certificate of incorporation and bylaws and Delaware Law**

Our certificate of incorporation and bylaws include a number of provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

#### ***Board composition and filling vacancies***

Our certificate of incorporation provides for the division of our board of directors into three classes serving staggered three-year terms, with one class being elected each year. Our certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of two-thirds or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our board of directors.

#### ***No written consent of stockholders***

Our certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

#### ***Meetings of stockholders***

Our certificate of incorporation and bylaws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

#### ***Advance notice requirements***

Our bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year provided, however, that in the event the annual meeting is first convened more than 30 days before or more than 60 days after such anniversary date, or if no annual meeting were held in the preceding year, notice by the stockholder to be timely must be received at our principal executive offices not later than the close of business on the later of the 90th day prior to the scheduled date of such annual meeting or the tenth day following the day on which public announcement of the date of such meeting is first made. Our bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

#### ***Amendment to certificate of incorporation and bylaws***

Any amendment of our certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our certificate of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition, and limitation of liability must be approved by not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to



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vote thereon as a class. Our bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the bylaws; and may also be amended by the affirmative vote of a majority of the outstanding shares entitled to vote on the amendment, voting together as a single class, except that the amendment of the provisions relating to notice of stockholder business and nominations and special meetings must be approved by not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to vote thereon as a class, or, if our board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

### ***Undesignated preferred stock***

Upon the completion of this offering, our certificate of incorporation will provide for 10,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

### **Exclusive Forum**

Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any state law claims 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 and employees to us or our stockholders; (3) any action asserting a claim arising pursuant to the Delaware General Corporation Law or our certificate of incorporation or bylaws (including the interpretation, validity or enforceability thereof) or (4) any action asserting a claim that is governed by the internal affairs doctrine; provided, however, that this provision shall not apply to any causes of action arising under the Securities Act or Exchange Act. In addition, our bylaws provide that, unless we consent in writing to an alternative forum, the federal district courts of the United States shall be the sole and exclusive forum for resolving any complaint asserting a cause of action under the Securities Act, or the Federal Forum Provision. Any person or entity purchasing or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these forum provisions. These forum provisions may impose additional costs on stockholders, may limit our stockholders' ability to bring a claim in a forum they find favorable, and the designated courts may reach different judgments or results than other courts. In addition, there is uncertainty as to whether our Federal Forum Provision will be enforced, which may impose additional costs on us and our stockholders.

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

Upon completion of this offering, we will be subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

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- upon consummation of the transaction which 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 commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by our board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

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

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

### **Listing on the Nasdaq Global Market**

Our common stock is listed on the Nasdaq Global Market under the symbol "IKNA."

### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar's address is 250 Royall Street, Canton, Massachusetts 02021, and its telephone number is (800) 962-4284.

## DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any debt securities that we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities offered under a prospectus supplement may differ from the terms described below. Unless the context requires otherwise, whenever we refer to the indenture, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

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

The following summary of material provisions of the debt securities and the indenture is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

### General

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit that we may designate. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as “discount securities,” which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with “original issue discount” (“OID”) for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in any applicable prospectus supplement.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;
- any limit upon the aggregate principal amount that may be issued;
- the maturity date or dates;
- the form of the debt securities of the series;
- the applicability of any guarantees;
- 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;
- if the price (expressed as a percentage of the aggregate principal amount thereof) at which such debt securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such debt securities that is convertible into another security or the method by which any such portion shall be determined;

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- the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date or dates, if any, on which, and the price or prices at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- any and all terms, if applicable, relating to any auction or remarketing of the debt securities of that series and any security for our obligations with respect to such debt securities and any other terms which may be advisable in connection with the marketing of debt securities of that series;
- whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities; and the depositary for such global security or securities;
- if applicable, the provisions relating to conversion or exchange of any debt securities of the series and the terms and conditions upon which such debt securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at our option or the holders' option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange;
- if other than the full principal amount thereof, the portion of the principal amount of debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;
- additions to or changes in the covenants applicable to the particular debt securities being issued, including, among others, the consolidation, merger or sale covenant;
- additions to or changes in the events of default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium, if any, and interest, if any, with respect to such securities to be due and payable;
- additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;
- additions to or changes in the provisions relating to satisfaction and discharge of the indenture;
- additions to or changes in the provisions relating to the modification of the indenture both with and without the consent of holders of debt securities issued under the indenture;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;
- whether interest will be payable in cash or additional debt securities at our or the holders' option and the terms and conditions upon which the election may be made;
- the terms and conditions, if any, upon which we will pay amounts in addition to the stated interest, premium, if any and principal amounts of the debt securities of the series to any holder that is not a "United States person" for federal tax purposes;
- any restrictions on transfer, sale or assignment of the debt securities of the series; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

### **Conversion or Exchange Rights**

We will set forth in the applicable prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our common stock or our other securities. We will include provisions as to settlement upon conversion or exchange and whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock or our other securities that the holders of the series of debt securities receive would be subject to adjustment.

### **Consolidation, Merger or Sale**

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indenture will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of our assets as an entirety or substantially as an entirety. However, any successor to or acquirer of such assets (other than any subsidiary of ours) must assume all of our obligations under the indenture or the debt securities, as appropriate.

### **Events of Default under the Indenture**

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the following are events of default under the indenture with respect to any series of debt securities that we may issue:

- if we fail to pay any installment of interest on any series of debt securities, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by us in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of interest for this purpose;
- if we fail to pay the principal of, or premium, if any, on any series of debt securities as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to such series; provided, however, that a valid extension of the maturity of such debt securities in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of principal or premium, if any;
- if we fail to observe or perform any other covenant or agreement contained in the debt securities or the indenture, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive written notice of such failure, requiring the same to be remedied and stating that such is a notice of default thereunder, from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indenture, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

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A holder of the debt securities of any series will have the right to institute a proceeding under the indenture or to appoint a receiver or trustee, or to seek other remedies only if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request,
- such holders have offered to the trustee indemnity satisfactory to it against the costs, expenses and liabilities to be incurred by the trustee in compliance with the request; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indenture.

### **Modification of Indenture; Waiver**

We and the trustee may change an indenture without the consent of any holders with respect to specific matters:

- to cure any ambiguity, defect or inconsistency in the indenture or in the debt securities of any series;
- to comply with the provisions described above under “Description of Debt Securities—Consolidation, Merger or Sale”;
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- to add to our covenants, restrictions, conditions or provisions such new covenants, restrictions, conditions or provisions for the benefit of the holders of all or any series of debt securities, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred upon us in the indenture;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;
- to make any change that does not adversely affect the interests of any holder of debt securities of any series in any material respect;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided above under “Description of Debt Securities—General” to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment under any indenture by a successor trustee; or
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act.

In addition, under the indenture, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of any debt securities of any series;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any series of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

## **Discharge**

Each indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- provide for payment;
- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- pay principal of and premium and interest on any debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

## **Form, Exchange and Transfer**

We will issue the debt securities of each series only in fully registered form without coupons and, unless we provide otherwise in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indenture provides that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company (“DTC”) or another depository named by us and identified in the applicable prospectus supplement with respect to that series. To the extent the debt securities of a series are issued in global form and as book-entry, a description of terms relating to any book-entry securities will be set forth in the applicable prospectus supplement.

At the option of the holder, subject to the terms of the indenture and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indenture and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will impose no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

## **Information Concerning the Trustee**

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indenture at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

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### **Payment and Paying Agents**

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

### **Governing Law**

The indenture and the debt securities will be governed by and construed in accordance with the laws of the state of New York, except to the extent that the Trust Indenture Act is applicable.



## DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement, which includes this prospectus.

### General

We may issue warrants for the purchase of common stock, preferred stock in one or more series. We may issue warrants independently or together with common stock, preferred stock, and the warrants may be attached to or separate from these securities.

We will evidence each series of warrants by warrant certificates that we will issue under a separate warrant agreement. We will enter into the warrant agreement with a warrant agent. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the periods during which, and places at which, the warrants are exercisable;
- the manner of exercise;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;
- federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

## DESCRIPTION OF UNITS

We may issue units comprised of shares of common stock, shares of preferred stock and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish. This section outlines certain provisions of the units that we may issue. If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. The information described in this section may not be complete in all respects and is qualified entirely by reference to the unit agreement with respect to the units of any particular series. The specific terms of any series of units offered will be described in the applicable prospectus supplement. If so described in a particular supplement, the specific terms of any series of units may differ from the general description of terms presented below. We urge you to read any prospectus supplement related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference as exhibits to the registration statement, which includes this prospectus.

Each unit that we may issue 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. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The applicable prospectus supplement may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;
- the applicable United States federal income tax considerations relating to the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- any other terms of the units and of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Capital Stock,” and “Description of Warrants” will apply to the securities included in each unit, to the extent relevant and as may be updated in any prospectus supplements.

### **Issuance in Series**

We may issue units in such amounts and in as many distinct series as we wish. This section summarizes terms of the units that apply generally to all series. Most of the financial and other specific terms of a particular series of units will be described in the applicable prospectus supplement.

### **Unit Agreements**

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We will identify the unit agreement under which each series of units will be issued and the unit agent under that agreement in the applicable prospectus supplement.

The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement:

### ***Modification without Consent***

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder:

- to cure any ambiguity; any provisions of the governing unit agreement that differ from those described below;
- to correct or supplement any defective or inconsistent provision; or

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- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

### ***Modification with Consent***

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would:

- impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right; or
- reduce the percentage of outstanding units or any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval:

- If the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series; or
- If the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document.

In each case, the required approval must be given by written consent.

### ***Unit Agreements Will Not Be Qualified under Trust Indenture Act***

No unit agreement will be qualified as an indenture, and no unit agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of units issued under unit agreements will not have the protections of the Trust Indenture Act with respect to their units.

### ***Mergers and Similar Transactions Permitted; No Restrictive Covenants or Events of Default***

The unit agreements will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or consolidate with, or sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under the unit agreements. We will then be relieved of any further obligation under these agreements.

The unit agreements will not include any restrictions on our ability to put liens on our assets, nor will they restrict our ability to sell our assets. The unit agreements also will not provide for any events of default or remedies upon the occurrence of any events of default.

### ***Governing Law***

The unit agreements and the units will be governed by New York law.

***Form, Exchange and Transfer***

We will issue each unit in global—i.e., book-entry—form only. Units in book-entry form will be represented by a global security registered in the name of a depository, which will be the holder of all the units represented by the global security. Those who own beneficial interests in a unit will do so through participants in the depository’s system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depository and its participants. We will describe book-entry securities, and other terms regarding the issuance and registration of the units in the applicable prospectus supplement.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them.

The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.

- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder’s proof of legal ownership. The transfer agent may also require an indemnity before replacing any units.
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement.

Only the depository will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

***Payments and Notices***

In making payments and giving notices with respect to our units, we will follow the procedures as described in the applicable prospectus supplement.

## PLAN OF DISTRIBUTION

We may sell the securities offered through this prospectus and any accompanying prospectus supplement, if required, in any of the following ways: (i) to or through underwriters or dealers, (ii) directly to purchasers, including our affiliates, (iii) through agents, (iv) in an “at the market offering,” within the meaning of Rule 415(a)(4) of the Securities Act or (v) through a combination of any of these methods or any other method permitted by law. The securities may be distributed at a fixed price or prices, which may be changed, market prices prevailing at the time of sale, prices related to the prevailing market prices, or negotiated prices, either:

- on or through the facilities of The Nasdaq Global Select Market or any other securities exchange or quotation or trading service on which such securities may be listed, quoted or traded at the time of sale; and/or
- to or through a market maker otherwise than on The Nasdaq Global Select Market or such other securities exchanges or quotation or trading services.

In addition, we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing security holders.

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

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

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

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

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

In connection with the offering of securities, we may grant to the underwriters an option to purchase additional securities with an additional underwriting commission, as may be set forth in the accompanying prospectus supplement. If we grant any such option, the terms of such option will be set forth in the prospectus supplement for such securities.

If a dealer is used in the sale of the securities in respect of which the prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer, who may be deemed to be an “underwriter” as that term is defined in the Securities Act, may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

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

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

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

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

Offered securities may also be offered and sold, if so indicated in the prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more remarketing 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 applicable prospectus supplement. Remarketing firms may be deemed to be underwriters in connection with their remarketing of offered securities.

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

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

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

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

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

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

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

The anticipated date of delivery of offered securities will be set forth in the applicable prospectus supplement relating to each offer.

## LEGAL MATTERS

Unless the applicable prospectus supplement indicates otherwise, the validity of the securities in respect of which this prospectus is being delivered will be passed upon by Goodwin Procter LLP, Boston, Massachusetts.

## EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our consolidated financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at [www.sec.gov](http://www.sec.gov) and on our investor website at [ir.ikenaoncology.com](http://ir.ikenaoncology.com). Our website is not a part of this prospectus and is not incorporated by reference in this prospectus.

We have the authority to designate and issue more than one class or series of stock having various preferences, conversion and other rights, voting powers, restrictions, limitations as to dividends, qualifications, and terms and conditions of redemption. See "Description of Capital Stock." We will furnish a full statement of the relative rights and preferences of each class or series of our stock which has been so designated and any restrictions on the ownership or transfer of our stock to any stockholder upon request and without charge. Written requests for such copies should be directed to Ikena Oncology, Inc., 645 Summer Street, Suite 101, Boston, MA 02210, Attention: Corporate Secretary.

This prospectus is part of a registration statement on Form S-3 we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our consolidated subsidiaries and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.



## INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) between the date of the initial registration statement and the effectiveness of the registration statement and following the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed:

- Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2021, filed with the SEC on March 17, 2022;
- The information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2021 from our definitive proxy statement on Schedule 14a (other than information furnished rather than filed) filed with the SEC on [April 27, 2022](#);
- Current Reports on Form 8-K filed with the SEC on [January 26, 2022](#), [January 28, 2022](#), [February 24, 2022](#), [April 6, 2022](#), and [April 13, 2022](#); and
- The description of our common stock contained in our Registration Statement on [Form 8-A](#) filed on March 23, 2021, including any amendments or reports filed for the purpose of updating such description.

In addition, all reports and other documents filed by us pursuant to the Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus.

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

Ikena Oncology, Inc.  
645 Summer Street, Suite 101  
Boston, MA 02210  
Attn: Investor Relations  
(857) 273-8343

**IKENA ONCOLOGY, INC.**

**\$300,000,000**

**Common Stock**

**Preferred Stock**

**Debt Securities**

**Warrants**

**Units**

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**PROSPECTUS**

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**, 2022**

We have not authorized any dealer, salesperson or other person to give any information or represent anything not contained in this prospectus. You must not rely on any unauthorized information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not offer to sell any securities in any jurisdiction where it is unlawful. Neither the delivery of this prospectus, nor any sale made hereunder, shall create any implication that the information in this prospectus is correct after the date hereof.

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**The information in this prospectus is not complete and may be changed. We may not sell these securities or accept an offer to buy these securities until the registration statement of which this prospectus forms a part filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and it is not soliciting offers to buy these securities in any jurisdiction where such offer or sale is not permitted.**

**Subject to completion, dated April 27, 2022**

**PROSPECTUS**



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

**Common Stock**

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We have entered into an Open Market Sale Agreement<sup>SM</sup>, or the sale agreement, with Jefferies LLC, or Jefferies, dated April 27, 2022, relating to the sale of shares of our common stock, \$0.001 par value per share. In accordance with the terms of the sale agreement, pursuant to this prospectus, we may offer and sell shares of our common stock having an aggregate offering price of up to \$100,000,000 from time to time through Jefferies, acting as our sales agent.

Our common stock is listed on The Nasdaq Global Market under the symbol "IKNA." On April 25, 2022, the closing sale price of our common stock on The Nasdaq Global Market was \$5.88 per share.

Sales of our common stock, if any, under this prospectus will be made by any method permitted that is deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, or the Securities Act. Jefferies is not required to sell any specific number or dollar amount of securities, but will act as a sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between Jefferies and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Jefferies will be entitled to compensation under the terms of the sale agreement at a fixed commission rate of 3.0% of the gross proceeds of any shares of common stock sold under the sale agreement. In connection with the sale of our common stock on our behalf, Jefferies will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Jefferies will be deemed to be underwriting commissions or discounts. See "Plan of Distribution" beginning on page S-15 for additional information regarding the compensation to be paid to Jefferies. We have also agreed to provide indemnification and contribution to Jefferies against certain liabilities, including liabilities under the Securities Act and the Securities Exchange Act of 1934, as amended, or the Exchange Act.

We are an "emerging growth company" and a "smaller reporting company" under the federal securities laws and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and for future filings. See "Prospectus Summary—Implications of Being an Emerging Growth Company and a Smaller Reporting Company."

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**Investing in our common stock involves a high degree of risk. See "[Risk Factors](#)" beginning on page S-5 of this prospectus and under similar headings in the other documents that are incorporated by reference into this prospectus concerning factors you should consider before investing in our common stock.**

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

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**Jefferies**

The date of this prospectus is \_\_\_\_\_, 2022.

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, using a “shelf” registration process. Under this registration statement, we may offer shares of our common stock having an aggregate offering price of up to \$300,000,000. Under this prospectus, we may offer shares of our common stock having an aggregate offering price of up to \$100,000,000 from time to time at prices and on terms to be determined by market conditions at the time of offering. The \$100,000,000 of shares of our common stock that may be sold under this prospectus are included in the \$300,000,000 of shares of common stock that may be sold under the registration statement.

Before buying any of the shares of common stock offered hereby, we urge you to read carefully this prospectus, together with the information incorporated herein by reference as described below under the heading “Incorporation of Certain Information by Reference.” These documents contain important information that you should consider when making your investment decision. To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference in this prospectus that was filed with the SEC before the date of this prospectus, on the other hand, you should rely on the information in this prospectus, provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in this prospectus—the statement in the document having the later date modifies or supersedes the earlier statement.

We have not authorized anyone to provide you with information other than the information that we have provided or incorporated by reference in this prospectus or any accompanying prospectus supplement and your reliance on any unauthorized information or representation is at your own risk. This prospectus may be used only in jurisdictions where offers and sales of these securities are permitted. You should assume that the information appearing in this prospectus is accurate only as of the date of this prospectus and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, or any sale of our common stock. Our business, financial condition and results of operations may have changed since those dates.

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

Unless otherwise stated, all references in this prospectus to “we,” “us,” “our,” “Ikena,” “the Company” and similar designations refer, collectively, to Ikena Oncology, Inc., a Delaware corporation, and its consolidated subsidiaries.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements, other than statements of historical facts, included in this prospectus, including the documents that we incorporate by reference, regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth are forward-looking statements. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, among other things, statements about:

- our expectations related to the use of any net proceeds from this offering;
- the initiation, timing, progress, results, and cost of our research and development programs and our current and future preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our research and development programs;
- our ability to efficiently discover and develop product candidates;
- our ability and the potential to successfully manufacture our drug substances and product candidates for preclinical use, for clinical trials, and on a larger scale, for commercial use, if approved;
- the ability and willingness of our third-party strategic collaborators to continue research and development activities relating to our development candidates and product candidates;
- our ability to obtain funding for our operations necessary to complete further development and commercialization of our product candidates;
- our ability to obtain and maintain regulatory approval of our product candidates;
- our ability to commercialize our products, if approved;
- the pricing and reimbursement of our product candidates, if approved;
- the implementation of our business model, and strategic plans for our business and product candidates;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates;
- estimates of our future expenses, revenue, capital requirements, and our needs for additional financing;
- the potential benefits of strategic collaboration agreements, our ability to enter into strategic collaborations or arrangements, and our ability to attract collaborators with development, regulatory and commercialization expertise;
- future agreements with third parties in connection with the commercialization of product candidates and any other approved product;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- our financial performance;
- the rate and degree of market acceptance of our product candidates;
- regulatory developments in the United States and relevant foreign countries;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- our ability to produce our products or product candidates with advantages in turnaround times or manufacturing cost;
- the success of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel;
- the impact of laws and regulations;
- our use of proceeds from our initial public offering;
- developments relating to our competitors and our industry;

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- the effect of the ongoing COVID-19 pandemic, including mitigation efforts and economic effects, on any of the foregoing or other aspects of our business operations, including but not limited to our preclinical studies and clinical trials and any future studies or trials; and
- other risks and uncertainties, including those under the caption “Risk Factors.”

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this prospectus, including the documents that we incorporate by reference, particularly in our “critical accounting estimates” described in Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Use of Estimates” and in Part I, Item 1A “Risk Factors” of our most recent annual report on Form 10-K filed with the SEC, which is incorporated by reference in this prospectus, and in the “Risk Factors” section of this prospectus, that could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, collaborations or investments that we may make.

You should read this prospectus, including the documents that we incorporate by reference, completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

## PROSPECTUS SUMMARY

*This summary highlights selected information about us and this offering and does not contain all of the information that you should consider before investing in our common stock. You should read this prospectus carefully, especially the risks of investing in our common stock discussed under "Risk Factors" beginning on page S-5 of this prospectus and in Part I, Item 1A "Risk Factors" of our most recent annual report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K we file after the date of this prospectus, which is incorporated by reference in this prospectus, along with our consolidated financial statements and notes to those consolidated financial statements and the other information incorporated by reference in this prospectus, before making an investment decision.*

### Company Overview

We are a targeted oncology company developing precision medicines tailored to biomarker-defined patient groups with specific unmet needs. With our robust biomarker and translational approach we aim to develop targeted cancer therapies and define patient populations who are most likely to respond to treatment. Our current programs are across the Hippo pathway, RAS pathway, and key immune signals in the tumor-microenvironment, or TME, with approaches to targeting both cancer driving targets and mechanisms of resistance to targeted therapies. Our focus on patient-driven development is platform and process agnostic, allowing us to research both known and novel targets, with a shared guiding principle of aiming to address the unmet needs of biomarker-defined patient populations. Since we commenced operations in 2016, we have advanced multiple product candidates into clinical development. In addition, we have a robust pipeline of discovery-stage targeted oncology programs.

Our lead targeted oncology product candidate, IK-930, is an oral small molecule inhibitor of the transcriptional enhanced associate domain, or TEAD, transcription factor in the Hippo signaling pathway. The Hippo pathway is genetically altered in approximately 10% of human cancers and is widely accepted as a prevalent driver of cancer pathogenesis and a mediator of poor outcomes for patients. In our ongoing first-in-human clinical trial, we are focusing on indications that provide the potential for rapid clinical development to achieve proof-of-concept, such as NF2 deficient mesothelioma and solid tumors with YAP1 or TAZ gene fusions, including epithelioid hemangioendothelioma, in which 100% of patients have Hippo pathway alterations. We also plan to assess IK-930 in combination with other targeted therapies across several indications, including EGFR mutated non-small cell lung cancer and KRAS mutated cancers. In October 2021, our Investigational New Drug Application, or IND, for IK-930 was accepted by the U.S. Food and Drug Administration and we subsequently initiated a first in human Phase 1 clinical trial to evaluate the safety, tolerability, pharmacokinetics, pharmacodynamics, and preliminary antitumor activity of IK-930 in patients with advanced solid tumors with or without gene alterations in the Hippo pathway. The first patient was dosed in January 2022.

Our discovery efforts are focused on additional targeted oncology programs, following our philosophy of designing treatments for patient populations identified through the genetic make-up of their tumors. Our pre-clinical pipeline is growing to include additional Hippo pathway and RAS pathway-targeting programs, including our program against the novel target extracellular signal related kinase 5. We are generating mechanistic and translational data to identify underserved RAS-mutated cancer patient populations and assess approaches that could benefit them.

Our clinical-stage programs also include product candidates in development to target immune signaling in the TME. These programs are all built on the same foundation of biomarker-driven clinical trial design and patient enrichment, aiming to develop therapies that can precisely be used for specific cancer patients. IK-175 is an oral inhibitor of aryl hydrocarbon receptor, which we are evaluating in a Phase 1a/1b clinical trial, as monotherapy and in combination with nivolumab, in patients with advanced or metastatic solid tumors, including urothelial carcinomas, for which current standard-of-care therapy is no longer effective or is intolerable. We expect to report initial clinical data from this trial in the second half of 2022. Additionally, we plan to initiate a second Phase 1b clinical trial to evaluate IK-175 in patients with head and neck squamous cell carcinoma in the second half of 2022. The IK-175 program is being developed in partnership with Bristol-Myers Squibb Company.



Also within TME immune signaling, IK-007, which is designed to inhibit the prostaglandin E receptor 4 in the COX2 pathway, is being evaluated in a Phase 1b clinical trial in combination with pembrolizumab for the treatment of patients with advanced or progressive microsatellite stable colorectal cancer for which first and second line standard therapy (at least one of which contained fluorouracil) is no longer effective or is intolerable. We recently completed enrollment in this trial and expect to report data at a medical conference in the second half of 2022.

### **Corporate History and Information**

We were incorporated under the laws of the State of Delaware in February 2016. We are the successor in interest to KYN Therapeutics L.L.C., a limited liability company formed under the laws of the State of Texas in September 2014. In December 2019, we changed our name from Kyn Therapeutics, Inc. to Ikena Oncology, Inc. Our principal corporate office is located at 645 Summer Street, Suite 101, Boston, MA 02210, and our telephone number is (857) 273-8343. Our website address is [www.ikenaoncology.com](http://www.ikenaoncology.com). We do not incorporate the information on or accessible through our website into this prospectus, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus.

### **Implications of Being an Emerging Growth Company and a Smaller Reporting Company**

We qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, as amended. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

- being permitted to only disclose two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;
- reduced disclosure about our executive compensation arrangements;
- not being required to hold advisory votes on executive compensation or to obtain stockholder approval of any golden parachute arrangements not previously approved; and
- an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We may take advantage of these exemptions until the fifth anniversary of our initial public offering or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company on the date that is the earliest of (i) the last day of the fiscal year in which we have total annual gross revenue of \$1.07 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of the completion of this offering; (iii) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years; or (iv) the last day of the fiscal year in which we are deemed to be a large accelerated filer under the rules of the SEC which means the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the prior June 30th. We may choose to take advantage of some but not all of these exemptions. We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock. We are in the process of evaluating the benefits of relying on other exemptions and reduced reporting requirements under the JOBS Act. Subject to certain conditions, as an emerging growth company, we may rely on certain of these exemptions, including without limitation, providing an auditor’s attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act.

We are also a “smaller reporting company” as defined in the Exchange Act. We may continue to be a smaller reporting company even after we are no longer an emerging growth company. We may take advantage of certain of the scaled disclosures available to smaller reporting companies until the fiscal year following the determination that our voting and non-voting common stock held by non-affiliates is more than \$250 million measured on the last business day of our second fiscal quarter, or our annual revenues are less than \$100 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is more than \$700 million measured on the last business day of our second fiscal quarter.

### **The Offering**

<b>Common stock offered by us</b>	Shares of our common stock having an aggregate offering price of up to \$100,000,000.
<b>Common stock to be outstanding after this offering</b>	Up to 52,981,836 shares, assuming sales of 17,006,802 shares of our common stock in this offering at an offering price of \$5.88 per share, which was the last reported sale price of our common stock on The Nasdaq Global Market on April 25, 2022. The actual number of shares of common stock issued will vary depending on the sales price under this offering.
<b>Plan of Distribution</b>	“At the market offering” that may be made from time to time on The Nasdaq Global or such other national securities exchange on which our common stock is then listed, through our sales agent, Jefferies LLC. See the section entitled “Plan of Distribution” on page S-15 of this prospectus.
<b>Use of proceeds</b>	We intend to use the net proceeds from this offering, if any, for working capital, capital expenditures and other general corporate purposes, including to fund the research and development of our product candidates. We may also use a portion of the net proceeds to invest in or acquire businesses or technologies that we believe are complementary to our own, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus. See “Use of Proceeds” on page S-7 of this prospectus.
<b>Risk factors</b>	You should read the “Risk Factors” section of this prospectus beginning on page S-5 and other information included in, or incorporated by reference into, this prospectus for a discussion of factors to consider before deciding to purchase shares of our common stock.
<b>Nasdaq Global Market symbol</b>	IKNA

The number of shares of our common stock to be outstanding after this offering is based on 35,975,034 shares of our common stock outstanding as of December 31, 2021 and excludes:

- 5,822,373 shares of common stock issuable upon the exercise of stock options outstanding as of December 31, 2021, at a weighted average exercise price of \$7.17 per share;

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- 224,098 shares of common stock issuable upon the exercise of stock options granted subsequent to December 31, 2021, at a weighted average exercise price of \$10.74 per share;
- 3,263,664 shares of common stock available for future issuance under our 2021 Stock Option and Incentive Plan (the “2021 Plan”) as of December 31, 2021, as well as any automatic increases in the number of shares of common stock reserved for issuance under the 2021 Plan; and
- 346,613 shares of common stock available for future issuance under our 2021 Employee Stock Purchase Plan (the “ESPP”) as of December 31, 2021, as well as any automatic increases in the number of shares of common stock reserved for issuance under the ESPP.

Except as otherwise noted, the information in this prospectus assumes no exercise of outstanding stock options described above.

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. Before you decide to invest in our common stock, you should carefully consider the risks and uncertainties described below and in Part I, Item 1A “Risk Factors” of our most recent annual report on Form 10-K, and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K we file after the date of this prospectus, together with all other information contained in this prospectus and in our filings with the SEC that we have incorporated by reference in this prospectus. If any of the following risks actually occurs, our business, financial condition or results of operations could be adversely affected, which, in turn, could have a negative impact on the price of our common stock. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.*

### **Additional Risks Related To Our Common Stock And This Offering**

***If you purchase shares of common stock in this offering, you may suffer immediate and substantial dilution of your investment.***

The price per share of our common stock in this offering may exceed the net tangible book value per share of our common stock outstanding prior to this offering. Therefore, if you purchase shares of our common stock in this offering, you may pay a price per share that substantially exceeds our net tangible book value per share after this offering. To the extent shares are issued under outstanding options at exercise prices lower than the price of our common stock in this offering, you will incur further dilution. Assuming that an aggregate of 17,006,802 shares of our common stock are sold at a price of \$5.88 per share, the last reported sale price of our common stock on The Nasdaq Global Market on April 25, 2022, for aggregate proceeds to us of \$96,558,000 after deducting commissions and estimated aggregate offering expenses payable by us, you will experience immediate dilution of \$0.13 per share, representing the difference between our as adjusted net tangible book value per share as of December 31, 2021 after giving effect to this offering and the assumed offering price. See the section entitled “Dilution” below for a more detailed illustration of the dilution you would incur if you participate in this offering.

***We have broad discretion in the use of the net proceeds from this offering and may use them in ways that you and other stockholders may not approve.***

We currently expect to use the net proceeds of this offering for working capital, capital expenditures and other general corporate purposes, including to fund the research and development of our product candidates. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management will have broad discretion in the application of the net proceeds from this offering and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Our management might not spend the net proceeds in ways that improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value. See “Use of Proceeds.”

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

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

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***Future sales or issuances of our common stock in the public markets, or the perception of such sales, could depress the trading price of our common stock.***

The sale of a substantial number of shares of our common stock or other securities convertible into or exchangeable for our common stock in the public markets, or the perception that such sales could occur, could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We may sell large quantities of our common stock at any time pursuant to this prospectus or in one or more separate offerings. We cannot predict the effect that future sales of common stock or other equity-related securities would have on the market price of our common stock.

***The actual number of shares we will issue and gross proceeds resulting from those sales, at any one time or in total, is uncertain.***

Subject to certain limitations in the sale agreement and compliance with applicable law, we have the discretion to deliver a placement notice to Jefferies at any time throughout the term of the sale agreement. The number of shares that are sold by Jefferies after delivering a placement notice will fluctuate based on the market price of our common stock during the sales period and limits we set with Jefferies in any instruction to sell shares, and the demand for our common stock during the sales period. Because the price per share of each share sold will fluctuate based on the market price of our common stock during the sales period, it is not possible at this stage to predict the number of shares or the gross proceeds to be raised in connection with those sales, if any, that will be ultimately issued.

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

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

## USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to \$100,000,000 from time to time under this prospectus. The amount of the net proceeds to us from this offering will depend upon the number of shares of our common stock sold and the price at which they are sold. There can be no assurance that we will be able to sell any shares under or fully utilize the sale agreement with Jefferies.

We currently intend to use the net proceeds from this offering primarily to fund the research and development of our product candidates. This may include acquisitions or investments in businesses, products or technologies that are complementary to our own, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus, and for working capital and general corporate purposes. Pending these uses, we may invest the net proceeds from this offering in short-term U.S. Treasury securities with insignificant rates of return, or may hold such proceeds as cash, until they are used for their stated purpose. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of net proceeds.

The expected use of net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the actual net proceeds from this offering (which will depend on the market price of our common stock during the sales period, any limits we may set with Jefferies in any applicable placement notice and the demand for our common stock), the progress of our development, the status of and results from clinical trials and collaborations that we may enter into with third parties for our product candidates and any unforeseen cash needs, including the factors described under “Risk Factors” in this prospectus and in the documents incorporated by reference herein. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. We may find it necessary or advisable to use the net proceeds from this offering for other purposes, and we will have broad discretion in the application of net proceeds.

We do not expect that the net proceeds from this offering, together with our existing cash, cash equivalents and investments, will be sufficient to enable us to fund the completion of development of any of our product candidates.

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

## DILUTION

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

As of December 31, 2021, we had net tangible book value of approximately \$207.9 million, or \$5.78 per share of our common stock, based upon 35,975,034 shares of our common stock outstanding as of that date. Historical net tangible book value per share is equal to our total tangible assets, less total liabilities, divided by the number of outstanding shares of our common stock. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of our common stock pursuant to this prospectus in the aggregate amount of \$100.0 million at an assumed offering price of \$5.88 per share, the last reported sale price of our common stock on The Nasdaq Global Market on April 25, 2022, and after deducting commissions and estimated aggregate offering expenses payable by us, our net tangible book value as of April 25, 2022 would have been \$304.4 million, or \$5.75 per share of common stock. This represents an immediate decrease in the net tangible book value of \$0.03 per share to our existing stockholders and an immediate dilution in net tangible book value of \$0.13 per share to new investors. The following table illustrates this per share dilution:

Assumed offering price per share	\$ 5.88
Net tangible book value per share as of December 31, 2021	\$ 5.78
Decrease per share attributable to sale of shares of common stock in this offering	\$(0.03)
As adjusted net tangible book value per share after this offering	\$ 5.75
Dilution per share to new investors purchasing shares in this offering	\$ 0.13

The table above assumes for illustrative purposes that an aggregate of 17,006,802 shares of our common stock are sold pursuant to this prospectus at a price of \$5.88 per share, the last reported sale price of our common stock on The Nasdaq Global Market on April 25, 2022, for aggregate gross proceeds of \$100.0 million. The shares sold in this offering, if any, will be sold from time to time at various prices. An increase of \$1.00 per share in the price at which the shares are sold from the assumed offering price to \$6.88 per share, assuming all of our common stock in the aggregate amount of \$100.0 million is sold at that price, would result in an adjusted net tangible book value per share after the offering of \$6.03 per share and would increase the dilution in net tangible book value per share to new investors in this offering to \$0.85 per share, after deducting commissions and estimated aggregate offering expenses payable by us. A decrease of \$1.00 per share in the price at which the shares are sold from the assumed offering price to \$4.88 per share, assuming all of our common stock in the aggregate amount of \$100.0 million is sold at that price, would result in no dilution to new investors in this offering. This information is supplied for illustrative purposes only.

The above discussion and table are based on 35,975,034 shares of our common stock outstanding as of December 31, 2021 and excludes the following:

- 5,822,373 shares of common stock issuable upon the exercise of stock options outstanding as of December 31, 2021, at a weighted average exercise price of \$7.17 per share;
- 224,098 shares of common stock issuable upon the exercise of stock options granted subsequent to December 31, 2021, at a weighted average exercise price of \$10.74 per share;

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- 3,263,664 shares of common stock available for future issuance under our 2021 Plan as of December 31, 2021, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2021 Plan; and
- 346,613 shares of common stock available for future issuance under our ESPP as of December 31, 2021, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the ESPP.

To the extent that options outstanding as of December 31, 2021 have been or may be exercised or settle, as applicable, or other shares issued, investors purchasing our common stock in this offering may experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.



## **DIVIDEND POLICY**

We have never declared or paid cash dividends on our capital stock. We currently plan to retain all of our future earnings, if any, to finance the operation, development and growth of our business. We do not expect to pay any cash dividends on our common stock in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in current or future financing instruments, provisions of applicable law and other factors the board deems relevant. Our ability to pay dividends on our common stock may be restricted by the terms of any of our future indebtedness.

## MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax considerations applicable to non-U.S. holders (as defined below) with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering. For purposes of this discussion, a non-U.S. holder means a beneficial owner of our common stock that is for U.S. federal income tax purposes:

- a non-resident alien individual;
- a foreign corporation or other organization taxable as a corporation; or
- a foreign trust or estate, the income of which is not subject to U.S. federal income tax on a net income basis.

This discussion does not address the tax treatment of partnerships or other entities or arrangements that are treated as pass-through entities for U.S. federal income tax purposes or persons that hold their common stock through partnerships or other pass-through entities. A partner in a partnership or other pass-through entity that will hold our common stock should consult his, her or its tax advisor regarding the tax consequences of acquiring, holding and disposing of our common stock through a partnership or other pass-through entity, as applicable.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended (the “Code”), existing and proposed U.S. Treasury Regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus and, all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any such change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus. There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein. We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset within the meaning of Section 1221 of the Code, generally property held for investment.

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder’s individual circumstances nor does it address any U.S. state, local or non-U.S. taxes, the alternative minimum tax, the Medicare tax on net investment income, the rules regarding qualified small business stock within the meaning of Section 1202 of the Code, or any other aspect of any U.S. federal tax other than the income tax. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as:

- insurance companies;
- tax-exempt or governmental organizations;
- financial institutions;
- brokers or dealers in securities;
- regulated investment companies;
- pension plans;

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- “controlled foreign corporations,” “passive foreign investment companies,” and corporations that accumulate earnings to avoid U.S. federal income tax;
- “qualified foreign pension funds,” or entities wholly owned by a “qualified foreign pension fund”;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons that own, or have owned, actually or constructively, more than 5% of our common stock;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment; and
- U.S. expatriates.

This discussion is for information only and is not tax advice. Accordingly, all prospective non-U.S. holders of our common stock should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock, including any proposed change in applicable laws.

### **Distributions on Our Common Stock**

Distributions, if any, on our common stock will generally constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder’s investment, up to such holder’s tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below in “Gain on Sale or Other Taxable Disposition of Our Common Stock.” Any such distributions will also be subject to the discussions below under the sections titled “Backup Withholding and Information Reporting” and “Withholding and Information Reporting Requirements—FATCA.”

Subject to the discussion in the following two paragraphs in this section, dividends paid to a non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States, are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. To claim the exemption, the non-U.S. holder must generally furnish to the applicable withholding agent a properly executed IRS Form W-8ECI (or other applicable or successor form). However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the same U.S. federal income tax rates applicable to United States persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional “branch profits tax” at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence.

A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder’s country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or other applicable or successor form) to the applicable withholding agent and satisfy applicable certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim with the IRS.

### **Gain on Sale or Other Taxable Disposition of Our Common Stock**

Subject to the discussions below under “Backup Withholding and Information Reporting” and “Withholding and Information Reporting Requirements—FATCA,” a non-U.S. holder generally will not be subject to any U.S. federal income tax on any gain realized upon such holder’s sale or other taxable disposition of shares of our common stock unless:

- the gain is effectively connected with the non-U.S. holder’s conduct of a U.S. trade or business and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed base maintained by such non-U.S. holder in the United States, in which case the non-U.S. holder generally will be taxed on a net income basis at the same U.S. federal income tax rates applicable to United States persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in “Distributions on Our Common Stock” also may apply;
- the non-U.S. holder is a nonresident alien individual who is present in the United States for a period or periods aggregating 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence) on the net gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder, if any, provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or
- we are, or have been, at any time during the five-year period preceding such sale or other taxable disposition (or the non-U.S. holder’s holding period, if shorter) a “U.S. real property holding corporation,” unless our common stock is regularly traded on an established securities market and the non-U.S. holder holds no more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above.

### **Backup Withholding and Information Reporting**

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S. holders may have to comply with specific certification procedures to establish that the holder is not a United States person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Generally, a non-U.S. holder will comply with such procedures if it provides a properly executed IRS Form W-8BEN-E (or other applicable Form W-8) or otherwise meets documentary evidence requirements for establishing that it is a non-U.S. holder, or otherwise establishes an exemption. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above in “Distributions on Our Common Stock,” generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker.

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Non-U.S. holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them. Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder's U.S. federal income tax liability, if any, provided that an appropriate claim is filed with the IRS in a timely manner.

### **Withholding and Information Reporting Requirements—FATCA**

Provisions of the Code commonly referred to as the Foreign Account Tax Compliance Act, or FATCA, generally impose a U.S. federal withholding tax at a rate of 30% on payments of dividends on our common stock paid to a foreign entity unless (i) if the foreign entity is a "foreign financial institution," such foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the foreign entity is not a "foreign financial institution," such foreign entity identifies certain of its U.S. investors, if any, or (iii) the foreign entity is otherwise exempt under FATCA. Such withholding may also apply to gross proceeds from the sale or other disposition of our common stock, although under proposed U.S. Treasury Regulations, no withholding would apply to such gross proceeds. The preamble to the proposed regulations specifies that taxpayers (including withholding agents) are generally permitted to rely on the proposed regulations pending finalization. If withholding under FATCA is required on any payment related to our common stock, under certain circumstances, a non-U.S. holder may be eligible for refunds or credits of this withholding tax. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. Non-U.S. holders should consult their tax advisors regarding the possible implications of FATCA on their investment in our common stock and the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of the 30% withholding tax under FATCA.

## PLAN OF DISTRIBUTION

We have entered into a sale agreement with Jefferies, under which we may offer and sell up to \$100,000,000 of our shares of common stock from time to time through the Jefferies acting as sales agent. Sales of shares of our common stock, if any, under this prospectus will be made by any method that is deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act.

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

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

We will pay Jefferies a commission equal to 3.0% of the gross proceeds we receive from each sale of shares of our common stock. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. In addition, we have agreed to reimburse Jefferies for the fees and disbursements of its counsel, payable upon execution of the sale agreement, in an amount not to exceed \$75,000, in addition to certain ongoing disbursements of its legal counsel. We estimate that the total expenses for the offering, excluding any commissions or expense reimbursement payable to Jefferies under the terms of the sale agreement, will be approximately \$442,000. The remaining sale proceeds, after deducting any other transaction fees, will equal our net proceeds from the sale of such shares.

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

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

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

This summary of the material provisions of the sale agreement does not purport to be a complete statement of its terms and conditions. A copy of the sales agreement is filed as an exhibit to this prospectus.

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

## **LEGAL MATTERS**

The validity of the shares of common stock offered hereby will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Jefferies LLC is being represented in connection with this offering by Wilmer Cutler Pickering Hale and Dorr LLP, New York, New York.

## **EXPERTS**

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our consolidated financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

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

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at [www.sec.gov](http://www.sec.gov) and on our investor website at [ir.ikenaoncology.com](http://ir.ikenaoncology.com). Our website is not a part of this prospectus and is not incorporated by reference in this prospectus.

This prospectus is part of a registration statement that we have filed with the SEC. Certain information in the registration statement has been omitted from this prospectus in accordance with the rules of the SEC. For more detail about us and any securities that may be offered by this prospectus, you may examine the registration statement of which this prospectus forms a part, including its exhibits and schedules. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete, and in each instance we refer you to the copy of the contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference in this prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporate by reference the documents listed below (File No. 001-40287) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

- Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2021, filed with the SEC on March 17, 2022;
- The information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2021 from our definitive proxy statement on Schedule 14a (other than information furnished rather than filed) filed with the SEC on [April 27, 2022](#);
- Current Reports on Form 8-K filed with the SEC on [January 26, 2022](#), [January 28, 2022](#), [February 24, 2022](#), [April 6, 2022](#), and [April 13, 2022](#); and
- The description of our common stock contained in our Registration Statement on [Form 8-A](#) filed on March 23, 2021, including any amendments or reports filed for the purpose of updating such description.

In addition, all reports and other documents filed by us pursuant to the Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus.

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

Ikena Oncology, Inc.  
645 Summer Street, Suite 101  
Boston, MA 02210  
Attn: Investor Relations  
(857) 273-8343

In accordance with Rule 412 of the Securities Act, any statement contained in a document incorporated by reference herein shall be deemed modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement.





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

**Common Stock**

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**PROSPECTUS**

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**Jefferies**

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**, 2022**

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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 various expenses to be incurred in connection with the sale and distribution of the securities being registered.

SEC registration fee	\$27,810
FINRA filing fee	\$45,500
Printing and engraving	*
Accounting services	*
Legal fees of registrant's counsel	*
Miscellaneous	*
Total	*

\* These fees are calculated based on the number of issuances and the amount of securities offered and accordingly cannot be estimated at this time.

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

Section 145 of the Delaware General Corporation Law, or DGCL, authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys' fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys' fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

We have adopted provisions in our certificate of incorporation and bylaws that limit or eliminate the personal liability of our directors to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any unlawful payments related to dividends or unlawful stock purchases, redemptions or other distributions; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

In addition, our bylaws provide that:

- we will indemnify our directors, officers and, in the discretion of our board of directors, certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and
- we will advance reasonable expenses, including attorneys' fees, to our directors and, in the discretion of our board of directors, to our officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of us, subject to limited exceptions.

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We have entered into indemnification agreements with each of our directors and executive officers. These agreements provide that we will indemnify each of our directors, our executive officers and, at times, their affiliates to the fullest extent permitted by Delaware law. We will advance expenses, including attorneys' fees (but excluding judgments, fines and settlement amounts), to each indemnified director, executive officer or affiliate in connection with any proceeding in which indemnification is available and we will indemnify our directors and officers for any action or proceeding arising out of that person's services as a director or officer brought on behalf of us or in furtherance of our rights. Additionally, certain of our directors or officers may have certain rights to indemnification, advancement of expenses or insurance provided by their affiliates or other third parties, which indemnification relates to and might apply to the same proceedings arising out of such director's or officer's services as a director referenced herein. Nonetheless, we have agreed in the indemnification agreements that our obligations to those same directors or officers are primary and any obligation of such affiliates or other third parties to advance expenses or to provide indemnification for the expenses or liabilities incurred by those directors are secondary.

We also maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act of 1933, as amended, or the Securities Act.

### **Item 16. Exhibits.**

The exhibits to this Registration Statement are listed in the Exhibit Index, which appears elsewhere herein and is incorporated herein by reference.

### **Item 17. Undertakings.**

The undersigned Registrant hereby undertakes:

- (a)
    - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
      - (i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the "Securities Act of 1933");
      - (ii) to reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of 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 this registration statement or any material change to such information in this registration statement;
- provided, however,* that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.

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

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

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

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

(ii) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act 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 such 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, such 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 such 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 such undersigned Registrant or used or referred to by such undersigned Registrant;

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

(iv) any other communication that is an offer in the offering made by such undersigned Registrant to the purchaser.

(6) 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 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof;

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

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

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

(10) 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 of 1939 in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Trust Indenture Act of 1939.

**EXHIBIT INDEX**

<b>Exhibit No.</b>	<b>Description</b>
1.1*	Form of Underwriting Agreement
1.2	<a href="#">Sale Agreement, dated as of April 27, 2022, between the Registrant and Jefferies LLC</a>
3.1	<a href="#">Fifth Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-40287) filed with the SEC on March 30, 2021)</a>
3.2	<a href="#">Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-40287) filed with the SEC on March 30, 2021)</a>
4.1	<a href="#">Fourth Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, dated December 18, 2020 (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-253919) filed with the SEC on March 5, 2021)</a>
4.2	<a href="#">Specimen Certificate Evidencing Shares of Common Stock (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-253919) filed with the SEC on March 22, 2021)</a>
4.3*	Specimen Certificate for Preferred Stock
4.4*	Form of Certificate of Designations
4.5	<a href="#">Form of Senior Indenture between Registrant and one or more trustees to be named</a>
4.6	<a href="#">Form of Subordinated Indenture between Registrant and one or more trustees to be named</a>
4.7*	Form of Warrant Agreement
4.8*	Form of Unit Agreement
5.1	<a href="#">Opinion of Goodwin Procter LLP</a>
5.2	<a href="#">Opinion of Goodwin Procter LLP relating to sale agreement prospectus</a>
23.1	<a href="#">Consent of Ernst &amp; Young LLP, independent registered public accounting firm for the Registrant</a>
23.2	<a href="#">Consent of Goodwin Procter LLP (included in Exhibit 5.1)</a>
23.3	<a href="#">Consent of Goodwin Procter LLP (included in Exhibit 5.2)</a>
24	<a href="#">Power of Attorney (included in the signature pages to the Registration Statement)</a>
25.1**	Form T-1 Statement of Eligibility of Trustee for Senior Indenture under the Trust Indenture Act of 1939, as amended
25.2**	Form T-1 Statement of Eligibility of Trustee for Subordinated Indenture under the Trust Indenture Act of 1939, as amended
107	<a href="#">Filing Fee Table</a>

\* To be filed by amendment or by a Current Report on Form 8-K.

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

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the town of Boston, Commonwealth of Massachusetts, on this 27th day of April, 2022.

**IKENA ONCOLOGY, INC.**

By: /s/ Mark Manfredi  
Mark Manfredi, Ph.D.  
President and Chief Executive Officer

**POWER OF ATTORNEY AND SIGNATURES**

KNOW ALL BY THESE PRESENT, that each individual whose signature appears below hereby constitutes and appoints Mark Manfredi, Ph.D. as such person's true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for such person in such person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-3, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that any said attorney-in-fact and agent, or any substitute or substitutes of any of them, may lawfully 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 person in the capacities and on the date indicated.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

**Signature**

**Title**

**Date**

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<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Mark Manfredi</u> Mark Manfredi, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	April 27, 2022
<u>/s/ Jotin Marango</u> Jotin Marango, M.D., Ph.D.	Chief Financial Officer and Head of Corporate Development (Principal Accounting Officer and Principal Financial Officer)	April 27, 2022
<u>/s/ Ron Renaud</u> Ron Renaud	Director	April 27, 2022
<u>/s/ David Bonita</u> David Bonita, M.D.	Director	April 27, 2022
<u>/s/ Iain D. Dukes</u> Iain D. Dukes, D.Phil.	Director	April 27, 2022
<u>/s/ Jean-François Formela</u> Jean-François Formela, M.D.	Director	April 27, 2022
<u>/s/ Maria Koehler</u> Maria Koehler, M.D., Ph.D.	Director	April 27, 2022
<u>/s/ Otello Stampacchia</u> Otello Stampacchia, Ph.D.	Director	April 27, 2022
<u>/s/ Richard Wooster</u> Richard Wooster, M.D.	Director	April 27, 2022



OPEN MARKET SALE AGREEMENT<sup>SM</sup>

April 27, 2022

JEFFERIES LLC  
520 Madison Avenue  
New York, New York 10022

Ladies and Gentlemen:

Ikena Oncology, Inc., a Delaware corporation (the “**Company**”), proposes, subject to the terms and conditions stated herein, to issue and sell from time to time through Jefferies LLC, as sales agent and/or principal (the “**Agent**”), shares of the Company’s common stock, par value \$0.001 per share (the “**Common Shares**”), having an aggregate offering price of up to \$100,000,000 on the terms set forth in this agreement (this “**Agreement**”).

**Section 1. DEFINITIONS**

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

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

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

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

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

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

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

<sup>SM</sup> “Open Market Sale Agreement” is a service mark of Jefferies LLC

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

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

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

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

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

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

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

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

“**Selling Commission**” means three percent (3%) of the gross proceeds of Shares sold pursuant to this Agreement, or as otherwise agreed between the Company and the Agent with respect to any Shares sold pursuant to this Agreement.

“**Settlement Date**” means the second business day following each Trading Day during the period set forth in the Issuance Notice on which Shares are sold pursuant to this Agreement, when the Company shall deliver to the Agent the amount of Shares sold on such Trading Day and the Agent shall deliver to the Company the Issuance Price received on such sales.

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

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

## **Section 2. REPRESENTATIONS AND WARRANTIES OF THE COMPANY**

The Company represents and warrants to, and agrees with, the Agent that as of (1) the date of this Agreement, (2) each Issuance Notice Date, (3) each Settlement Date, (4) each Triggering Event Date and (5) as of each Time of Sale (each of the times referenced above is referred to herein as a “**Representation**”

**Date**”), except as may be disclosed in the Prospectus (including any documents incorporated by reference therein and any supplements thereto) on or before a Representation Date:

(a) **Registration Statement.** The Company has prepared and will file with the Commission a shelf registration statement on Form S-3 that contains a base prospectus. Such registration statement will register the issuance and sale by the Company of the Shares under the Securities Act. The Company may file one or more additional registration statements from time to time that will contain a base prospectus and related prospectus or prospectus supplement, if applicable, with respect to the Shares including pursuant to Rule 462(b) under the Securities Act (any such registration statement filed pursuant to Rule 462(b), a **“Rule 462(b) Registration Statement”**). Except where the context otherwise requires, such registration statement(s), including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, including all financial statements, exhibits and schedules thereto and all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act as from time to time amended or supplemented, is herein referred to as the **“Registration Statement,”** and the prospectus constituting a part of such registration statement(s), together with any prospectus supplement filed with the Commission pursuant to Rule 424(b) under the Securities Act relating to a particular issuance of the Shares, including all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act, in each case, as from time to time amended or supplemented, is referred to herein as the **“Prospectus,”** except that if any revised prospectus is provided to the Agent by the Company for use in connection with the offering of the Shares that is not required to be filed by the Company pursuant to Rule 424(b) under the Securities Act, the term **“Prospectus”** shall refer to such revised prospectus from and after the time it is first provided to the Agent for such use. The Registration Statement at the time it originally became effective is herein called the **“Original Registration Statement.”** As used in this Agreement, the terms “amendment” or “supplement” when applied to the Registration Statement or the Prospectus shall be deemed to include the filing by the Company with the Commission of any document under the Exchange Act after the date hereof that is or is deemed to be incorporated therein by reference.

All references in this Agreement to financial statements and schedules and other information which is “contained,” “included” or “stated” in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date; and all references in this Agreement to amendments or supplements to the Registration Statement or the Prospectus shall be deemed to mean and include, without limitation, the filing of any document under the Exchange Act which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date.

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

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

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

(c) Ineligible Issuer Status. The Company is not an “ineligible issuer” in connection with the offering of the Shares pursuant to Rules 164, 405 and 433 under the Securities Act. Any Free Writing Prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act. Each Free Writing Prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act including timely filing with the Commission or retention where required and legending, and each such Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the issuance and sale of the Shares did not, does not and will not include any information that conflicted, conflicts with or will conflict with the information contained in the Registration Statement or the Prospectus, including any document incorporated by reference therein. Except for the Free Writing Prospectuses, if any, and electronic road shows, if any, furnished to you before first use, the Company has not prepared, used or referred to, and will not, without your prior consent, prepare, use or refer to, any Free Writing Prospectus.

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

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

(f) Statistical and Market-Related Data. All statistical, demographic and market-related data included in the Registration Statement or the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate. To the extent required, the Company has obtained the written consent to the use of such data from such sources.

(g) Disclosure Controls and Procedures; Deficiencies in or Changes to Internal Control Over Financial Reporting. The Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15 and 15d-15 under the Exchange Act), which (i) are designed to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to the Company's principal executive officer and its principal financial officer by others within those entities, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared, it being understood that neither subsection (k) nor this subsection (l) requires the Company to comply with Section 404 of the Sarbanes Oxley Act of 2002 as of an earlier date than it would otherwise be required to so comply under applicable law; (ii) have been evaluated by management of the Company for effectiveness as of the end of the Company's most recent fiscal quarter; and (iii) are effective in all material respects to perform the functions for which they were established. Since the end of the Company's most recent audited fiscal year, there have been no significant deficiencies or material weakness in the Company's internal control over financial reporting (whether or not remediated) and no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company is not aware of any change in its internal control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(h) This Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(i) Authorization of the Shares. The Shares have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and nonassessable, and the issuance and sale of the Shares is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Shares.

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

(k) No Material Adverse Change. Except as otherwise disclosed in the Registration Statement and the Prospectus, subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus: (i) there has been no material adverse change, or any development that could be expected to result in a material adverse change, in the condition, financial or otherwise, or in (A) the

earnings, stockholders' equity, business, properties, operations, operating results, assets, liabilities or prospects, whether or not arising from transactions in the ordinary course of business, of the Company and its subsidiaries, considered as one entity or (B) the ability of the Company to consummate the transactions contemplated by this Agreement or perform its obligations hereunder (any such change being referred to herein as a "Material Adverse Change"); (ii) the Company and its subsidiaries, considered as one entity, have not incurred any material liability or obligation, indirect, direct or contingent, including without limitation any losses or interference with their business from fire, explosion, flood, earthquakes, accident or other calamity, whether or not covered by insurance, or from any strike, labor dispute or court or governmental action, order or decree, that are material, individually or in the aggregate, to the Company and its subsidiaries, considered as one entity, and have not entered into any transactions not in the ordinary course of business; and (iii) there has not been any material decrease in the capital stock or any material increase in any short-term or long-term indebtedness of the Company or its subsidiaries and there has been no dividend or distribution of any kind declared, paid or made by the Company or, except for dividends paid to the Company or other subsidiaries, by any of the Company's subsidiaries on any class of capital stock, or any repurchase or redemption by the Company or any of its subsidiaries of any class of capital stock.

(l) Independent Accountants. To the knowledge of the Company, Ernst & Young LLP, which has expressed its opinion with respect to the financial (which term as used in this Agreement includes the related notes thereto) filed with the Commission as a part of the Registration Statement and the Prospectus, is (i) an independent registered public accounting firm as required by the Securities Act, the Exchange Act, and the rules of the Public Company Accounting Oversight Board ("**PCAOB**"), (ii) in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X under the Securities Act and (iii) a registered public accounting firm as defined by the PCAOB whose registration has not been suspended or revoked and who has not requested such registration to be withdrawn.

(m) Financial Statements. The financial statements filed with the Commission as a part of the Registration Statement and the Prospectus present fairly in all material respects the consolidated financial position of the Company and its subsidiaries as of the dates indicated and the results of their operations, changes in stockholders' equity and cash flows for the periods specified. Such financial statements have been prepared in conformity with U.S. generally accepted accounting principles applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto and except in the case of unaudited financial statements, which are subject to normal and recurring year-end adjustments and do not contain certain footnotes as permitted by the applicable rules of the Commission. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto. No other financial statements or supporting schedules are required to be included in the Registration Statement or the Prospectus. To the Company's knowledge, no person who has been suspended or barred from being associated with a registered public accounting firm, or who has failed to comply with any sanction pursuant to Rule 5300 promulgated by the PCAOB, has participated in or otherwise aided the preparation of, or audited, the financial statements, supporting schedules or other financial data filed with the Commission as a part of the Registration Statement and the Prospectus.

(n) Company's Accounting System. The Company and each of its subsidiaries make and keep books and records that are accurate in all material respects and maintain a system of internal accounting controls designed to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with U.S. generally accepted accounting principles and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with existing assets

at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement and the Prospectus fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto.

(o) Incorporation and Good Standing of the Company. The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation and has the corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement and the Prospectus and to enter into and perform its obligations under this Agreement. The Company is duly qualified as a foreign corporation to transact business and is in good standing in the Commonwealth of Massachusetts and each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to so qualify or to be in good standing would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change.

(p) Subsidiaries. Each of the Company's "subsidiaries" (for purposes of this Agreement, as defined in Rule 405 under the Securities Act) has been duly incorporated or organized, as the case may be, and is validly existing as a corporation, partnership or limited liability company, as applicable, in good standing under the laws of the jurisdiction of its incorporation or organization and has the power and authority (corporate or other) to own, lease and operate its properties and to conduct its business as described in the Registration Statement and the Prospectus. Each of the Company's subsidiaries is duly qualified as a foreign corporation, partnership or limited liability company, as applicable, to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business. All of the issued and outstanding capital stock or other equity or ownership interests of each of the Company's subsidiaries have been duly authorized and validly issued, are fully paid and nonassessable and are owned by the Company, directly or through subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance, charge or adverse claim. None of the outstanding capital stock or equity interest in any subsidiary was issued in violation of preemptive or similar rights of any security holder of such subsidiary. The constitutive or organizational documents of each of the subsidiaries comply in all material respects with the requirements of applicable laws of its jurisdiction of incorporation or organization and are in full force and effect. The Company does not own or control, directly or indirectly, any corporation, partnership, limited liability company, association or other entity other than the subsidiaries listed in Exhibit 21.1 to the Company's most recently filed Annual Report on Form 10-K.

(q) Capitalization and Other Capital Stock Matters. Since the date of the most recent financial statements of the Company included or incorporated by reference in the Registration Statement and the Prospectus there has not been any change in the capital stock of the Company (other than for subsequent issuances, if any, pursuant to employee benefit plans, or upon the exercise of outstanding options or warrants, in each case described in the Registration Statement and the Prospectus). The Common Shares (including the Shares) conform in all material respects to the description thereof contained in the Prospectus. All of the issued and outstanding Common Shares have been duly authorized and validly issued, are fully paid and nonassessable and have been issued in compliance with all applicable federal and state securities laws. None of the outstanding Common Shares were issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or any of its subsidiaries other than those described in the Registration Statement and the Prospectus. The descriptions of the Company's stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, set forth in the Registration Statement and the Prospectus accurately and fairly presents in all material respects the information required to be shown with respect to such plans, arrangements, options and rights.

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

(s) Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required. Neither the Company nor any of its subsidiaries is in violation of its charter or by laws or similar organizational documents, as applicable, or is in default (or, with the giving of notice or lapse of time, would be in default) ("**Default**") under any indenture, loan, credit agreement, note, lease, license agreement, contract, franchise or other instrument (including, without limitation, any pledge agreement, security agreement, mortgage or other instrument or agreement evidencing, guaranteeing, securing or relating to indebtedness) to which the Company or any of its subsidiaries is a party or by which it or any of them may be bound, or to which any of their respective properties or assets are subject (each, an "**Existing Instrument**"), except for such Defaults as would not be reasonably expected, individually or in the aggregate, to result in a Material Adverse Change. The Company's execution, delivery and performance of this Agreement, consummation of the transactions contemplated hereby and by the Registration Statement and the Prospectus and the issuance and sale of the Shares (including the use of proceeds from the sale of the Shares as described in the Registration Statement and the Prospectus under the caption "Use of Proceeds") (i) have been duly authorized by all necessary corporate action and will not result in any violation of the provisions of the charter or by laws or similar organizational documents, as applicable, of the Company or any subsidiary (ii) will not conflict with or constitute a breach of, or Default or a Debt Repayment Triggering Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to, or require the consent of any other party to, any Existing Instrument and (iii) will not result in any violation of any law, administrative regulation or administrative or court decree applicable to the Company or any of its subsidiaries. No consent, approval, authorization or other order of, or registration or filing with, any court or other governmental or regulatory authority or agency, is required for the Company's execution, delivery and performance of this Agreement and consummation of the transactions contemplated hereby and by the Registration Statement and the Prospectus, except such as have been obtained or made by the Company and are in full force and effect under the Securities Act and such as may be required under applicable state securities or blue sky laws or the Financial Industry Regulatory Authority, Inc. ("**FINRA**"). As used herein, a "**Debt Repayment Triggering Event**" means any event or condition which gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

(t) No Material Actions or Proceedings. Except as otherwise disclosed in the Prospectus, there is no action, suit, proceeding, inquiry or investigation brought by or before any legal or governmental entity now pending or, to the knowledge of the Company, threatened, against or affecting the Company or any of its subsidiaries, which could be expected, individually or in the aggregate, to result in a Material Adverse Change. No material labor dispute with the employees of the Company or any of its subsidiaries, or with employees of any principal supplier, manufacturer, customer or contractor of the Company, exists or, to the knowledge of the Company, is threatened or imminent.



(u) **Intellectual Property Rights.** Except as otherwise disclosed in the Registration Statement or the Prospectus, the Company and its subsidiaries own, or have obtained valid and enforceable licenses for, the inventions, patent applications, patents, trademarks, trade names, service names, copyrights, trade secrets and other intellectual property described in the Registration Statement and the Prospectus as being owned or licensed by them or which are necessary for the conduct of their respective businesses as currently conducted or as currently proposed to be conducted as described in the Registration Statement and the Prospectus (collectively, “**Intellectual Property**”), and to the Company’s knowledge the conduct of their respective businesses does not and will not infringe, misappropriate or otherwise conflict in any material respect with any such rights of others. The Intellectual Property has not been adjudged by a court of competent jurisdiction to be invalid or unenforceable, in whole or in part, and the Company is unaware of any facts which would form a reasonable basis for any such adjudication. To the Company’s knowledge: (i) except as disclosed in the Registration Statement and the Prospectus, there are no third parties who have rights to any Intellectual Property, including liens, security interests or other encumbrances, except for customary reversionary rights of third-party licensors with respect to Intellectual Property that is disclosed in the Registration Statement and the Prospectus as licensed to the Company or one or more of its subsidiaries; and (ii) there is no infringement by third parties of any Intellectual Property. There is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the Company’s rights in or to any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Intellectual Property, including interferences, oppositions, reexaminations, or similar government proceedings, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that the Company or any of its subsidiaries infringes, misappropriates or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement or the Prospectus as under development, infringe, misappropriate or violate, any patent, trademark, trade name, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. The Company and its subsidiaries have complied with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or any subsidiary, and all such agreements are in full force and effect. To the Company’s knowledge, there are no material defects in any of the patents or patent applications included in the Intellectual Property. The Company and its subsidiaries have taken commercially reasonable steps to protect, maintain and safeguard their Intellectual Property, including the execution of appropriate nondisclosure, confidentiality agreements and invention assignment agreements and invention assignments with their employees, and to the Company’s knowledge no employee of the Company is in or has been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement, or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee’s employment with the Company. The duty of candor and good faith as required by the United States Patent and Trademark Office during the prosecution of the United States patents and patent applications included in the Intellectual Property have been complied with; and in all foreign offices having similar requirements, all such requirements have been complied with. None of the Company owned Intellectual Property or technology (including information technology and outsourced arrangements) employed by the Company or its subsidiaries has been obtained or is being used by the Company or its subsidiary in violation of any contractual obligation binding on the Company or its subsidiaries or any of their respective officers, directors or employees or otherwise in violation of the rights of any persons. The product candidates described in the Registration Statement and the Prospectus as under development by the Company or any subsidiary fall within the scope of the claims of one or more patents or patent applications owned by, or exclusively licensed to, the Company or any subsidiary.

(v) All Necessary Permits, etc. Except as otherwise disclosed in the Prospectus, the Company and its subsidiaries possess such valid and current licenses, certificates, authorizations, approvals, consents or permits required by state, federal or foreign regulatory agencies or bodies to conduct their respective businesses as currently conducted and as described in the Registration Statement or the Prospectus (“**Permits**”), except where the failure to possess or obtain the same or so qualify would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Change. Neither the Company nor any of its subsidiaries is in violation of, or in default under, any of the Permits or has received any notice of proceedings relating to the revocation or material modification of, or non-compliance with, any of the Permits, except for any such violations, defaults, or proceedings relating to the revocation or modification of, or non-compliance with, any such Permits that would not reasonably be expected, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, to have a Material Adverse Change.

(w) Title to Properties. Except as otherwise disclosed in the Prospectus, the Company and its subsidiaries have good and marketable title to all of the real and personal property and other assets reflected as owned in the financial statements referred to in Section 2(m) above (or elsewhere in the Registration Statement or the Prospectus), in each case free and clear of any security interests, mortgages, liens, encumbrances, equities, adverse claims and other defects, except such as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Change. The real property, improvements, equipment and personal property held under lease by the Company or any of its subsidiaries are held under valid and enforceable leases, with such exceptions as are not material and do not materially interfere with the use made or proposed to be made of such real property, improvements, equipment or personal property by the Company or such subsidiary.

(x) Tax Law Compliance. The Company and its subsidiaries have filed all necessary United States federal, state and non-U.S. income and other tax returns or have properly requested extensions thereof and have paid all taxes required to be paid by any of them and, if due and payable, any related or similar assessment, fine or penalty levied against any of them, except as may be being contested in good faith and by appropriate proceedings. The Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 2(m) above in respect of all federal, state and non-U.S. income and other taxes for all periods as to which the tax liability of the Company or any of its subsidiaries has not been finally determined.

(y) Company Not an “Investment Company.” The Company is not, and will not be, either after receipt of payment for the Offered Shares or after the application of the proceeds therefrom as described under “Use of Proceeds” in the Registration Statement or the Prospectus, required to register as an “investment company” under the Investment Company Act of 1940, as amended (the “**Investment Company Act**”).

(z) Insurance. Except as otherwise disclosed in the Prospectus, each of the Company and its subsidiaries are insured by recognized, financially sound and reputable institutions with policies in such amounts and with such deductibles and covering such risks as the Company reasonably believes are generally deemed adequate and customary for their businesses including, but not limited to, policies covering real and personal property owned or leased by the Company and its subsidiaries against theft, damage, destruction, acts of vandalism and earthquakes and policies covering the Company and its subsidiaries for product liability claims and clinical trial liability claims. The Company has no reason to believe that it or any of its subsidiaries will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not reasonably be expected to result in a Material Adverse Change. Neither the Company nor any of its subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(aa) No Price Stabilization or Manipulation; Compliance with Regulation M. Neither the Company nor any of its subsidiaries has taken, directly or indirectly, without giving effect to activities by the Agent, any action designed to or that might reasonably be expected to cause or result in stabilization or manipulation of the price of the Common Shares or of any “reference security” (as defined in Rule 100 of Regulation M under the Exchange Act (“**Regulation M**”)) with respect to the Common Shares, whether to facilitate the sale or resale of the Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

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

(cc) FINRA Matters. All of the information provided to the Agent or to counsel for the Agent by the Company, its counsel, its officers and directors and the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the offering of the Offered Shares is true, complete, correct and compliant with FINRA’s rules and any letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rules or NASD Conduct Rules is true, complete and correct.

(dd) No Unlawful Contributions or Other Payments. Neither the Company nor any of its subsidiaries nor, to the best of the Company’s knowledge, any employee or agent of the Company or any subsidiary, has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any applicable law or of the character required to be disclosed in the Registration Statement or the Prospectus.

(ee) Compliance with Environmental Laws. Except as described in the Prospectus and except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change: (i) neither the Company nor any of its subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or, to the Company’s knowledge, threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products (collectively, “**Hazardous Materials**”) or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, “**Environmental Laws**”); (ii) the Company and its subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements; (iii) there are no pending or, to the Company’s knowledge, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its subsidiaries; and (iv) there are no events or circumstances that might reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company or any of its subsidiaries relating to Hazardous Materials or any Environmental Laws.

(ff) ERISA Compliance. Except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change, (i) each “employee benefit plan” (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, “**ERISA**”)) established or maintained by the Company, its subsidiaries or their “ERISA Affiliates” (as defined below) are in compliance with ERISA; (ii) no “reportable event” (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any “employee benefit plan” established or maintained by the Company, its subsidiaries or any of their

ERISA Affiliates; (iii) no “employee benefit plan” established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates, if such “employee benefit plan” were terminated, would have any “amount of unfunded benefit liabilities” (as defined under ERISA); And (iv) neither the Company, its subsidiaries nor any of their ERISA Affiliates has incurred or reasonably expects to incur any liability under (A) Title IV of ERISA with respect to termination of, or withdrawal from, any “employee benefit plan” or (B) Sections 412, 4971, 4975 or 4980B of the Code. Each employee benefit plan established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code has received a favorable determination or opinion letter from the Internal Revenue Service upon which it can rely and, to the knowledge of the Company, nothing has occurred, whether by action or failure to act, which would cause the loss of such qualification. “**ERISA Affiliate**” means, with respect to the Company or any of its subsidiaries, any member of any group of organizations described in Sections 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the “**Code**”) of which the Company or such subsidiary is a member.

(gg) Brokers. Except as otherwise disclosed in the Prospectus, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder’s fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(hh) No Outstanding Loans or Other Extensions of Credit. The Company does not have any outstanding extension of credit, in the form of a personal loan, to or for any director or executive officer (or equivalent thereof) of the Company except for such extensions of credit as are expressly permitted by Section 13(k) of the Exchange Act.

(ii) Compliance with Laws. The Company and its subsidiaries have been and are in compliance with all applicable laws, rules and regulations, except where failure to be so in compliance would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change.

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

(kk) Anti-Corruption and Anti-Bribery Laws. Neither the Company nor any of its subsidiaries nor any director, officer or employee of the Company or any of its subsidiaries, nor to the knowledge of the Company, any agent, affiliate or other person acting on behalf of the Company or any of its subsidiaries has, in the course of its actions for, or on behalf of, the Company or any of its subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made or taken any act in furtherance of an offer, promise, or authorization of any direct or indirect unlawful payment or benefit to any foreign or domestic government official or employee, including of any government-owned or controlled entity or public international organization, or any political party, party official, or candidate for political office; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (the “**FCPA**”), the UK Bribery Act 2010, or any other applicable anti-bribery or anti-corruption law; or (iv) made, offered, authorized, requested, or taken an act in furtherance of any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment or benefit. The Company and its subsidiaries and, to the knowledge of the Company, the Company’s affiliates have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(ll) Money Laundering Laws. The operations of the Company and its subsidiaries are, and have been conducted at all times, in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “**Money Laundering Laws**”) and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(mm) Preclinical and Clinical Data and Regulatory Compliance. The preclinical tests and clinical trials, and other studies (collectively, “**studies**”) that are described in, or the results of which are referred to in, the Registration Statement or the Prospectus were and, if still ongoing, are being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such studies and with standard medical and scientific research procedures; each description of the results of such studies is accurate and complete in all material respects and fairly presents the data derived from such studies, and the Company and its subsidiaries have no knowledge of any other studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the Registration Statement or the Prospectus; the Company and its subsidiaries have made all such filings and obtained all such approvals as may be required by the Food and Drug Administration of the U.S. Department of Health and Human Services or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency, or health care facility Institutional Review Board (collectively, the “**Regulatory Agencies**”) to conduct their businesses as currently conducted and as described in the Registration Statement or the Prospectus; neither the Company nor any of its subsidiaries has received any notice of, or correspondence from, any Regulatory Agency requiring the termination, suspension or modification of any clinical trials that are described or referred to in the Registration Statement or the Prospectus; and the Company and its subsidiaries have each operated and currently are in compliance in all material respects with all applicable rules, regulations and policies of the Regulatory Agencies.

(nn) Sanctions. Neither the Company nor any of its subsidiaries, directors, officers, or employees, nor, to the knowledge of the Company, after due inquiry, any agent, affiliate or other person acting on behalf of the Company or any of its subsidiaries is currently the subject or the target of any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury (including, without limitation, the Ukraine-/Russia-related/Sectoral Sanctions Identification List sanctions program) or the U.S. Department of State, the United Nations Security Council, the European Union, Her Majesty’s Treasury of the United Kingdom, the Swiss Secretariat of Economic Affairs, or other relevant sanctions authority (collectively, “**Sanctions**”); nor is the Company or any of its subsidiaries located, organized or resident in a country or territory that is the subject or the target of Sanctions, including, without limitation, Belarus, Crimea, Cuba, Iran, North Korea, Russia and Syria (each, a “**Sanctioned Country**”); and the Company will not directly or indirectly use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, or any joint venture partner or other person or entity, for the purpose of financing the activities of or business with any person, or in any country or territory, that at the time of such financing, is the subject or the target of Sanctions or in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of applicable Sanctions. For the past five years, the Company and its subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(oo) Sarbanes-Oxley. There is, and has been, no failure on the part of the Company or any of the Company’s directors or officers, in their capacities as such, to comply with any applicable provision of the Sarbanes-Oxley Act of 2002, as amended and the rules and regulations promulgated in connection therewith, including Section 402 related to loans and Sections 302 and 906 related to certifications.

(pp) Cybersecurity. The Company and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "**IT Systems**") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, and free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and its subsidiaries have implemented and maintained commercially reasonable physical, technical and administrative controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data, including "Personal Data," used in connection with their businesses. "**Personal Data**" means (i) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) "personal data" as defined by GDPR; any information which would qualify as "protected health information" under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act (collectively, "HIPAA"); and (v) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person's health or sexual orientation. There have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same. The Company and its subsidiaries are presently in material compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification.

(qq) Compliance with Data Privacy Laws. The Company and its subsidiaries are, and at all prior times since January 1, 2018 were, in material compliance with all applicable state and federal data privacy and security laws and regulations, (collectively, the "**Privacy Laws**"). In furtherance of its efforts to comply with the Privacy Laws, the Company and its subsidiaries have in place, comply with, and take appropriate steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling, and analysis of Personal Data (the "**Policies**"). The Company and its subsidiaries have at all times since January 1, 2018 made all disclosures to users or customers required by applicable Privacy Laws, and none of such disclosures made or contained in any Policy have, to the knowledge of the Company, been inaccurate or in violation of any applicable laws and regulatory rules or requirements in any material respect. The Company further certifies that neither it nor any subsidiary: (i) has received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law.

(rr) Other Underwriting Agreements. The Company is not a party to any agreement with an agent or underwriter for any other "at the market" or continuous equity transaction.

(ss) Compliance with Health Care Laws. The Company and its subsidiaries are, and at all times have been, in compliance with all Health Care Laws. For purposes of this Agreement, “Health Care Laws” means: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. Section 301 et seq.), the Public Health Service Act (42 U.S.C. Section 201 et seq.), and the regulations promulgated thereunder; (ii) all applicable federal, state, local and foreign health care fraud and abuse laws, including, without limitation, the Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Civil False Claims Act (31 U.S.C. Section 3729 et seq.), the criminal false statements law (42 U.S.C. Section 1320a-7b(a)), 18 U.S.C. Sections 286 and 287, the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) (42 U.S.C. Section 1320d et seq.), the Stark Law (42 U.S.C. Section 1395nn), the civil monetary penalties law (42 U.S.C. Section 1320a-7a), the exclusion law (42 U.S.C. Section 1320a-7), the Physician Payments Sunshine Act (42 U.S.C. Section 1320-7h), and applicable laws governing government funded or sponsored healthcare programs; (iii) HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, HITECH (42 U.S.C. Section 17921 et seq.); (iv) the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010; (v) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; (vi) all other local, state, federal, national, supranational and foreign laws, relating to the regulation of the Company or its subsidiaries, and (vii) the directives and regulations promulgated pursuant to such statutes and any state or non-U.S. counterpart thereof. Neither the Company nor any of its subsidiaries has received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any federal and/or state court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in violation of any Health Care Laws nor, to the Company’s knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened. The Company and its subsidiaries have filed, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission). Neither the Company nor any of its subsidiaries is a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental or regulatory authority. Additionally, neither the Company, any of its subsidiaries, nor any of their respective employees, officers, directors, or agents has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

(tt) No Unlawful Contributions or Other Payments. Neither the Company nor any of its subsidiaries nor, to the best of the Company’s knowledge, any employee or agent of the Company or any subsidiary, has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any applicable law or of the character required to be disclosed in the Registration Statement or the Prospectus.

(uu) Forward-Looking Statements. Each financial or operational projection or other “forward-looking statement” (as defined by Section 27A of the Securities Act or Section 21E of the Exchange Act) contained in the Registration Statement or the Prospectus (i) was so included by the Company in good faith and with reasonable basis after due consideration by the Company of the underlying assumptions, estimates and other applicable facts and circumstances and (ii) is accompanied by meaningful cautionary statements identifying those factors that could cause actual results to differ materially from those in such forward-looking statement. No such statement was made with the knowledge of an executive officer or director of the Company that it was false or misleading.

(vv) No Rights to Purchase Preferred Stock. The issuance and sale of the Shares as contemplated hereby will not cause any holder of any shares of capital stock, securities convertible into or exchangeable or exercisable for capital stock or options, warrants or other rights to purchase capital stock or any other securities of the Company to have any right to acquire any shares of preferred stock of the Company.

(ww) No Contract Terminations. Neither the Company nor any of its subsidiaries has sent or received any communication regarding termination of, or intent not to renew, any of the contracts or agreements referred to or described in the Prospectus or any free writing prospectus, or referred to or described in, or filed as an exhibit to, the Registration Statement, and no such termination or non-renewal has been threatened by the Company or any of its subsidiaries or, to the Company's knowledge, any other party to any such contract or agreement, which threat of termination or non-renewal has not been rescinded as of the date hereof.

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

### **Section 3. ISSUANCE AND SALE OF COMMON SHARES**

(a) Sale of Securities. On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company and the Agent agree that the Company may from time to time seek to sell Shares through the Agent, acting as sales agent, or directly to the Agent, acting as principal, as follows, with an aggregate Sales Price of up to the Maximum Program Amount, based on and in accordance with Issuance Notices as the Company may deliver, during the Agency Period.

(b) Mechanics of Issuances.

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

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



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

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

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

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

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

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

(c) **Fees.** As compensation for services rendered, the Company shall pay to the Agent, on the applicable Settlement Date, the Selling Commission for the applicable Issuance Amount (including with respect to any suspended or terminated sale pursuant to Section 3(b)(vi)), by the Agent deducting the Selling Commission from the applicable Issuance Amount.

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

#### **Section 4. ADDITIONAL COVENANTS**

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

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

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

(c) Amendments and Supplements to the Prospectus and Other Securities Act Matters. If any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus so that the Prospectus does not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered to a purchaser, not misleading, or if in the opinion of the Agent or counsel for the Agent it is otherwise necessary to amend or supplement the Prospectus to comply with applicable law, including the Securities Act, the Company agrees (subject to Section 4(d) and 4(f)) to promptly prepare, file with the Commission and furnish at its own expense to the Agent, amendments or supplements to the Prospectus (including by filing a document incorporated by reference therein) so that the statements in the Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law including the Securities Act. Neither the Agent's consent to, or delivery of, any such amendment or supplement shall constitute a waiver of any of the Company's obligations under Sections 4(d) and 4(f).

(d) Agent's Review of Proposed Amendments and Supplements. Prior to amending or supplementing the Registration Statement (including any registration statement filed under Rule 462(b) under the Securities Act) or the Prospectus (excluding any amendment or supplement through incorporation of any report filed under the Exchange Act), the Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each such proposed amendment or supplement, and the Company shall not file or use any such proposed amendment or supplement without the Agent's prior consent, and to file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

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

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

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

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

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

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

(k) Listing; Reservation of Shares. (a) The Company will use its reasonable best efforts to maintain the listing of the Shares on the Principal Market; and (b) the Company will reserve and keep available at all times, free of preemptive rights, Shares for the purpose of enabling the Company to satisfy its obligations under this Agreement.

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

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

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

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

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

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

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

(any such event, a “**Triggering Event Date**”), the Company shall furnish the Agent (but in the case of clause (C) above only if the Agent reasonably determines that the information contained in such current report on Form 8-K of the Company is material) with a certificate as of the Triggering Event Date, in the form and substance satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as amended or supplemented, (A) confirming that the representations and warranties of the Company contained in this Agreement are true and correct, (B) that the Company has performed all of its obligations hereunder to be performed on or prior to the date of such certificate and as to the matters set forth in Section 5(a)(iii) hereof, and (C) containing any other certification that the Agent shall reasonably request. The requirement to provide a certificate under this Section 4(o) shall be waived for any Triggering Event Date occurring at a time when no Issuance Notice is pending or a suspension is in effect, which waiver shall continue until the earlier to occur of the date the Company delivers instructions for the sale of Shares hereunder (which for such calendar quarter shall be considered a Triggering Event Date) and the next occurring Triggering Event Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Triggering Event Date when a suspension was in effect and did not provide the Agent with a certificate under this Section 4(o), then before the Company delivers the instructions for the sale of Shares or the Agent sells any Shares pursuant to such instructions, the Company shall provide the Agent with a certificate in conformity with this Section 4(o) dated as of the date that the instructions for the sale of Shares are issued.

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

(q) Comfort Letter. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(o) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause Ernst & Young LLP, the independent registered public accounting firm who has audited the financial statements included or incorporated by reference in the Registration Statement, to furnish the Agent a comfort letter, dated the date of delivery, in form and substance reasonably satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel; provided, however, that any such comfort letter will only be required on the Triggering Event Date specified to the extent that it contains financial statements filed with the Commission under the Exchange Act and incorporated or deemed to be incorporated by reference into a Prospectus. If requested by the Agent, the Company shall also cause a comfort letter to be furnished to the Agent promptly following the date of occurrence of any material transaction or event requiring the filing of a current report on Form 8-K containing material amended financial information of the Company, including the restatement of the Company's financial statements. The Company shall be required to furnish no more than one comfort letter hereunder per calendar quarter.

(r) Secretary's Certificate. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date, the Company shall furnish the Agent a certificate executed by the Secretary of the Company, signing in such capacity, dated the date of delivery (i) certifying that attached thereto are true and complete copies of the resolutions duly adopted by the Board of Directors of the Company authorizing the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby (including, without limitation, the issuance of the Shares pursuant to this Agreement), which authorization shall be in full force and effect on and as of the date of such certificate, (ii) certifying and attesting to the office, incumbency, due authority and specimen signatures of each Person who executed this Agreement for or on behalf of the Company, and (iii) containing any other certification that the Agent shall reasonably request.

(s) Agent's Own Account; Clients' Account. The Company consents to the Agent trading, in compliance with applicable law, in the Common Shares for the Agent's own account and for the account of its clients at the same time as sales of the Shares occur pursuant to this Agreement.

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

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

(v) Notice of Other Sale. Without the written consent of the Agent, the Company will not, directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Shares or securities convertible into or exchangeable for Common Shares (other than Shares hereunder), warrants or any rights to purchase or acquire Common Shares, during the period beginning on the third Trading Day immediately prior to the date on which any Issuance Notice is delivered to the Agent

hereunder and ending on the third Trading Day immediately following the Settlement Date with respect to Shares sold pursuant to such Issuance Notice; and will not directly or indirectly enter into any other “at the market” or continuous equity transaction offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Shares (other than the Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Shares, warrants or any rights to purchase or acquire, Common Shares prior to the termination of this Agreement; provided, however, that such restrictions will not be required in connection with the Company’s (i) issuance or sale of Common Shares, options to purchase Common Shares or Common Shares issuable upon the exercise of options or other equity awards pursuant to any employee or director share option, incentive or benefit plan, share purchase or ownership plan, long-term incentive plan, dividend reinvestment plan, inducement award under Nasdaq rules or other compensation plan of the Company or its subsidiaries, as in effect on the date of this Agreement, (ii) issuance or sale of Common Shares issuable upon exchange, conversion or redemption of securities or the exercise or vesting of warrants, options or other equity awards outstanding at the date of this Agreement, and (iii) modification of any outstanding options, warrants of any rights to purchase or acquire Common Shares.

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

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

- (i) Accuracy of the Company’s Representations and Warranties; Performance by the Company. The Company shall have delivered the certificate required to be delivered pursuant to Section 4(o) on or before the date on which delivery of such certificate is required pursuant to Section 4(o). The Company shall have performed, satisfied and complied with all covenants, agreements and conditions required by this Agreement to be performed, satisfied or complied with by the Company at or prior to such date, including, but not limited to, the covenants contained in Section 4(p), Section 4(q) and Section 4(r).
- (ii) No Injunction. No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction or any self-regulatory organization having authority over the matters contemplated hereby that prohibits or directly and materially adversely affects any of the transactions contemplated by this Agreement, and no proceeding shall have been commenced that may have the effect of prohibiting or materially adversely affecting any of the transactions contemplated by this Agreement.
- (iii) Material Adverse Changes. Except as disclosed in the Prospectus and the Time of Sale Information, (a) in the judgment of the Agent there shall not have occurred any Material Adverse Change; and (b) there shall not have occurred any downgrading, nor shall any notice have been given of any intended or potential downgrading or of any review for a possible change that does not indicate the direction of the possible change, in the rating accorded any securities of the Company or any of its subsidiaries by any “nationally recognized statistical rating organization” as such term is defined for purposes of Section 3(a)(62) of the Exchange Act.



(iv) No Suspension of Trading in or Delisting of Common Shares; Other Events. The trading of the Common Shares (including without limitation the Shares) shall not have been suspended by the Commission, the Principal Market or FINRA and the Common Shares (including without limitation the Shares) shall have been approved for listing or quotation on and shall not have been delisted from the Nasdaq Stock Market, the New York Stock Exchange or any of their constituent markets. There shall not have occurred (and be continuing in the case of occurrences under clauses (i) and (ii) below) any of the following: (i) trading or quotation in any of the Company's securities shall have been suspended or limited by the Commission or by the Principal Market or trading in securities generally on either the Principal Market shall have been suspended or limited, or minimum or maximum prices shall have been generally established on any of such stock exchanges by the Commission or the FINRA; (ii) a general banking moratorium shall have been declared by any of federal or New York, authorities; or (iii) there shall have occurred any outbreak or escalation of national or international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States' or international political, financial or economic conditions, as in the judgment of the Agent is material and adverse and makes it impracticable to market the Shares in the manner and on the terms described in the Prospectus or to enforce contracts for the sale of securities.

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

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

## **Section 6. INDEMNIFICATION AND CONTRIBUTION**

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

statements therein, in the light of the circumstances under which they were made, not misleading; or (iii) any act or failure to act or any alleged act or failure to act by the Agent in connection with, or relating in any manner to, the Common Shares or the offering contemplated hereby, and which is included as part of or referred to in any loss, claim, damage, liability or action arising out of or based upon any matter covered by clause (i) or (ii) above, provided that the Company shall not be liable under this clause (iii) to the extent that a court of competent jurisdiction shall have determined by a final judgment that such loss, claim, damage, liability or action resulted directly from any such acts or failures to act undertaken or omitted to be taken by the Agent through its bad faith or willful misconduct, and to reimburse the Agent and each such officer, employee and controlling person for any and all expenses (including the reasonable and documented fees and disbursements of counsel chosen by the Agent) as such expenses are reasonably incurred by the Agent or such officer, employee or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; provided, however, that the foregoing indemnity agreement shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by the Agent expressly for use in the Registration Statement, any such Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information furnished by the Agent to the Company consists of the Agent's name in the Prospectus. The indemnity agreement set forth in this Section 6(a) shall be in addition to any liabilities that the Company may otherwise have.

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

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

(d) Settlements. The indemnifying party under this Section 6 shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by Section 6(b) hereof, the indemnifying party agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by such indemnifying party of the aforesaid request; and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is or could have been a party and indemnity was or could have been sought hereunder by such indemnified party, unless such settlement, compromise or consent includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such action, suit or proceeding.

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

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

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

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

## Section 7. TERMINATION & SURVIVAL

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

### (b) Termination; Survival Following Termination.

- (i) Either party may terminate this Agreement prior to the end of the Agency Period, by giving written notice as required by this Agreement, upon ten (10) Trading Days' notice to the other party; provided that, (A) if the Company terminates this Agreement after the Agent confirms to the Company any sale of Shares, the Company shall remain obligated to comply with Section 3(b)(v) with respect to such Shares and (B) Section 2, Section 6, Section 7 and Section 8 shall survive termination of this Agreement. If termination shall occur prior to the Settlement Date for any sale of Shares, such sale shall nevertheless settle in accordance with the terms of this Agreement.
- (ii) In addition to the survival provision of Section 7(b)(i), the respective indemnities, agreements, representations, warranties and other statements of the Company, of its officers and of the Agent set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of the Agent or the Company or any of its or their partners, officers or directors or any controlling person, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Shares sold hereunder and any termination of this Agreement.

## Section 8. MISCELLANEOUS

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

(b) No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (i) the transactions contemplated by this Agreement, including the determination of any fees, are arm's-length commercial transactions between the Company and the Agent, (ii) when acting as a principal under this Agreement, the Agent is and has been acting solely as a principal is not the agent or fiduciary of the Company, or its stockholders, creditors, employees or any other party, (iii) the Agent has not assumed nor will assume an advisory or fiduciary responsibility in favor of the Company with respect to the transactions contemplated hereby or the process leading thereto (irrespective of whether the Agent has advised or is

currently advising the Company on other matters) and the Agent does not have any obligation to the Company with respect to the transactions contemplated hereby except the obligations expressly set forth in this Agreement, (iv) the Agent and its respective Affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (v) the Agent has not provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated hereby and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

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

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

If to the Agent:

Jefferies LLC  
520 Madison Avenue  
New York, NY 10022  
Attention: General Counsel.

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

Wilmer Cutler Pickering Hale and Dorr LLP  
7 World Trade Center  
250 Greenwich Street  
New York, NY 10007  
Attention: Lisa Firenze.

If to the Company:

Ikena Oncology, Inc.  
645 Summer Street, Suite 101  
Boston, Massachusetts 02210  
E-mail: [accounting@ikenaoncology.com](mailto:accounting@ikenaoncology.com)  
Attention: Chief Operating Officer and Executive Vice President of Finance

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

Goodwin Procter LLP  
100 Northern Avenue  
Boston, Massachusetts 02210  
Facsimile: (617) 977-9449  
Attention: William Collins

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

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

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

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

(h) General Provisions. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, and may be delivered by facsimile transmission or by electronic delivery of a portable document format (PDF) file. The words “execution,” “signed,” “signature,” and words of like import in this Agreement or in any other certificate, agreement or document related to this Agreement or the offering and sale of the Shares shall include images of manually executed signatures transmitted by facsimile or other electronic format (including, without limitation, “pdf”, “tif” or “jpg”) and other electronic signatures (including, without limitation, DocuSign and AdobeSign). The use of electronic signatures and electronic records (including, without limitation, any contract or other record created, generated, sent, communicated, received, or stored by electronic means) shall be of the same legal effect, validity and enforceability as a manually executed signature or use of a paper based record-keeping system to the fullest extent permitted by applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act and any other applicable law, including, without limitation, any state law based on the Uniform Electronic Transactions Act. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The Article and Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

*[Signature Page Immediately Follows]*

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

Very truly yours,

**IKENA ONCOLOGY, INC.**

By: /s/ Mark Manfredi

Name: Mark Manfredi

Title: President and Chief Executive Officer

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

**JEFFERIES LLC**

By: /s/ Michael Magarro

Name: Michael Magarro

Title: Managing Director



**EXHIBIT A**  
ISSUANCE NOTICE

[Date]

Jefferies LLC  
520 Madison Avenue  
New York, New York 10022

Attn: [\_\_\_\_\_]

Reference is made to the Open Market Sale Agreement between Ikena Oncology, Inc. (the “**Company**”) and Jefferies LLC (the “**Agent**”) dated as of April \_\_, 2022. The Company confirms that all conditions to the delivery of this Issuance Notice are satisfied as of the date hereof.

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

\_\_\_\_\_

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

\$ \_\_\_\_\_

Number of days in selling period:

\_\_\_\_\_

First date of selling period:

\_\_\_\_\_

Last date of selling period:

\_\_\_\_\_

Settlement Date(s) if other than standard T+2 settlement:

\_\_\_\_\_

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

Comments: \_\_\_\_\_

**IKENA ONCOLOGY, INC.**

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

---

**Schedule A**  
**Notice Parties**

The Company

Mark Manfredi, Ph.D., President and Chief Executive Officer

The Agent

Donald Lynaugh

Michael Magarro

Jack Fabbri

**IKENA ONCOLOGY, INC.**

**Issuer**

**AND**

**[TRUSTEE],**

**Trustee**

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**INDENTURE**

**Dated as of [•], 202[•]**

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**Senior Debt Securities**

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## INDENTURE

INDENTURE, dated as of [•], 202 , among IKENA ONCOLOGY, INC., a Delaware corporation (the “Company”), and [TRUSTEE], as trustee (the “Trustee”):

WHEREAS, for its lawful corporate purposes, the Company has duly authorized the execution and delivery of this Indenture to provide for the issuance of debt securities (hereinafter referred to as the “Securities”), in an unlimited aggregate principal amount to be issued from time to time in one or more series as in this Indenture provided, as registered Securities without coupons, to be authenticated by the certificate of the Trustee;

WHEREAS, to provide the terms and conditions upon which the Securities are to be authenticated, issued and delivered, the Company has duly authorized the execution of this Indenture; and

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

NOW, THEREFORE, in consideration of the premises and the purchase of the Securities by the holders thereof, it is mutually covenanted and agreed as follows for the equal and ratable benefit of the holders of Securities:

### ARTICLE 1

#### DEFINITIONS

##### Section 1.01 Definitions of Terms.

The terms defined in this Section (except as in this Indenture or any indenture supplemental hereto otherwise expressly provided or unless the context otherwise requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section and shall include the plural as well as the singular. All other terms used in this Indenture that are defined in the Trust Indenture Act of 1939, as amended, or that are by reference in such Act defined in the Securities Act of 1933, as amended (except as herein or any indenture supplemental hereto otherwise expressly provided or unless the context otherwise 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 the execution of this instrument.

“*Authenticating Agent*” means an authenticating agent with respect to all or any of the series of Securities appointed by the Trustee pursuant to Section 2.10.

“*Bankruptcy Law*” means Title 11, U.S. Code, or any similar federal or state law for the relief of debtors.

“*Board of Directors*” means the Board of Directors (or the functional equivalent thereof) of the Company or any duly authorized committee of such Board.

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

“*Business Day*” means, with respect to any series of Securities, any day other than a day on which federal or state banking institutions in the Borough of Manhattan, the City of New York, or in the city of the Corporate Trust Office of the Trustee, are authorized or obligated by law, executive order or regulation to close.

“*Certificate*” means a certificate signed by any Officer. The Certificate need not comply with the provisions of Section 13.07.

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

“**Company**” means Ikena Oncology, Inc., a corporation duly organized and existing under the laws of the State of Delaware, and, subject to the provisions of Article Ten, shall also include its successors and assigns.

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

“**Custodian**” means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

“**Defaulted Interest**” has the meaning set forth in Section 2.03.

“**Depository**” means, with respect to Securities of any series for which the Company shall determine that such Securities will be issued as a Global Security, The Depository Trust Company, another clearing agency, or any successor registered as a clearing agency under the Exchange Act, or other applicable statute or regulation, which, in each case, shall be designated by the Company pursuant to either Section 2.01 or 2.11.

“**Event of Default**” means, with respect to Securities of a particular series, any event specified in Section 6.01, continued for the period of time, if any, therein designated.

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

“**Global Security**” means a Security issued to evidence all or a part of any series of Securities which is executed by the Company and authenticated and delivered by the Trustee to the Depository or pursuant to the Depository’s instruction, all in accordance with the Indenture, which shall be registered in the name of the Depository or its nominee.

“**Governmental Obligations**” means securities that are (a) direct obligations of the United States of America for the payment of which its full faith and credit is pledged or (b) obligations of a Person controlled or supervised by and acting as an agency or instrumentality of the United States of America, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America that, in either case, are not callable or redeemable at the option of the issuer thereof at any time prior to the stated maturity of the Securities, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such Governmental Obligation or a specific payment of principal of or interest on any such Governmental Obligation held by such custodian for the account of the holder of such depository receipt; provided, however, 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 Governmental Obligation or the specific payment of principal of or interest on the Governmental Obligation evidenced by such depository receipt.

“**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.

“**Indenture**” means this instrument as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into in accordance with the terms hereof and shall include the terms of particular series of Securities established as contemplated by Section 2.01.

“**Interest Payment Date**”, when used with respect to any installment of interest on a Security of a particular series, means the date specified in such Security or in a Board Resolution or in an indenture supplemental hereto with respect to such series as the fixed date on which an installment of interest with respect to Securities of that series is due and payable.

“**Officer**” means, with respect to the Company, the chairman of the Board of Directors, a chief executive officer, a president, a chief financial officer, a chief operating officer, any executive vice president, any senior vice president, any vice president, the treasurer or any assistant treasurer, the controller or any assistant controller or the secretary or any assistant secretary.

“**Officer’s Certificate**” means a certificate signed by any Officer. Each such certificate shall include the statements provided for in Section 13.07, if and to the extent required by the provisions thereof.

“**Opinion of Counsel**” means an opinion in writing subject to customary exceptions of legal counsel, who may be an employee of or counsel for the Company, that is delivered to the Trustee in accordance with the terms hereof. Each such opinion shall include the statements provided for in Section 13.07, if and to the extent required by the provisions thereof.

“**Outstanding**”, when used with reference to Securities of any series, means, subject to the provisions of Section 8.04, as of any particular time, all Securities of that series theretofore authenticated and delivered by the Trustee under this Indenture, except (a) Securities theretofore canceled by the Trustee or any paying agent, or delivered to the Trustee or any paying agent for cancellation or that have previously been canceled; (b) Securities or portions thereof for the payment or redemption of which moneys or Governmental Obligations in the necessary amount shall have been deposited in trust with the Trustee or with any paying agent (other than the Company) or shall have been set aside and segregated in trust by the Company (if the Company shall act as its own paying agent); provided, however, that if such Securities or portions of such Securities are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as provided in Article Three, or provision satisfactory to the Trustee shall have been made for giving such notice; and (c) Securities in lieu of or in substitution for which other Securities shall have been authenticated and delivered pursuant to the terms of Section 2.07.

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

“**Predecessor Security**” of any particular Security means every previous Security evidencing all or a portion of the same debt as that evidenced by such particular Security; and, for the purposes of this definition, any Security authenticated and delivered under Section 2.07 in lieu of a lost, destroyed or stolen Security shall be deemed to evidence the same debt as the lost, destroyed or stolen Security.

“**Responsible Officer**” when used with respect to the Trustee means any officer of the Trustee assigned by the Trustee to administer its corporate trust matters with respect to this Indenture (which, for the avoidance of doubt, includes without limitation any supplemental indenture hereto).

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

“**Securityholder**”, “**holder of Securities**”, “**registered holder**”, or other similar term, means the Person or Persons in whose name or names a particular Security is registered on the Security Register kept for that purpose in accordance with the terms of this Indenture.

“**Security Register**” and “**Security Registrar**” shall have the meanings as set forth in Section 2.05.

“**Subsidiary**” means, with respect to any Person:

(1) any corporation or company a majority of whose capital stock with voting power, under ordinary circumstances, to elect directors is, at the date of determination, directly or indirectly, owned by such Person (a “**subsidiary**”), by one or more subsidiaries of such Person or by such Person and one or more subsidiaries of such Person;



(2) a partnership in which such Person or a subsidiary of such Person is, at the date of determination, a general partner of such partnership; or

(3) any partnership, limited liability company or other Person in which such Person, a subsidiary of such Person or such Person and one or more subsidiaries of such Person, directly or indirectly, at the date of determination, have (x) at least a majority ownership interest or (y) the power to elect or appoint or direct the election or appointment of the managing partner or member of such Person or, if applicable, a majority of the directors or other governing body of such Person.

“*Trustee*” means \_\_\_\_\_, and, subject to the provisions of Article Seven, shall also include its successors and assigns, and, if at any time there is more than one Person acting in such capacity hereunder, “Trustee” shall mean each such Person. The term “Trustee” as used with respect to a particular series of the Securities shall mean the trustee with respect to that series.

“*Trust Indenture Act*” means the Trust Indenture Act of 1939, as amended.

## ARTICLE 2

### ISSUE, DESCRIPTION, TERMS, EXECUTION, REGISTRATION AND EXCHANGE OF SECURITIES

#### Section 2.01 Designation and Terms of Securities.

(1) The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more series up to the aggregate principal amount of Securities of that series from time to time authorized by or pursuant to a Board Resolution or pursuant to one or more indentures supplemental hereto. Prior to the initial issuance of Securities of any series, there shall be established in or pursuant to a Board Resolution, and set forth in an Officer’s Certificate, or established in one or more indentures supplemental hereto:

- (a) the title of the Securities of the series (which shall distinguish the Securities of that series from all other Securities);
- (b) any limit upon the aggregate principal amount of the Securities of that series which may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of that series);
- (c) the date or dates on which the principal of the Securities of the series is payable;
- (d) if the price (expressed as a percentage of the aggregate principal amount thereof) at which such Securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such Securities that is convertible into another security or the method by which any such portion shall be determined;
- (e) the rate or rates at which the Securities of the series shall bear interest or the manner of calculation of such rate or rates, if any;
- (f) the date or dates from which such interest shall accrue, the Interest Payment Dates on which such interest will be payable or the manner of determination of such Interest Payment Dates, the place(s) of payment, and the record date for the determination of holders to whom interest is payable on any such Interest Payment Dates or the manner of determination of such record dates;
- (g) the right, if any, to extend the interest payment periods and the duration of such extension;

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

(i) the obligation, if any, of the Company to redeem or purchase Securities of the series pursuant to any sinking fund, mandatory redemption, or analogous provisions (including payments made in cash in satisfaction of future sinking fund obligations) or at the option of a holder thereof and the period or periods within which, the price or prices at which, and the terms and conditions upon which, Securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

(j) the form of the Securities of the series including the form of the Certificate of Authentication for such series;

(k) if other than denominations of one thousand U.S. dollars (\$1,000) or any integral multiple thereof, the denominations in which the Securities of the series shall be issuable;

(l) any and all other terms (including terms, to the extent applicable, relating to any auction or remarketing of the Securities of that series and any security for the obligations of the Company with respect to such Securities) with respect to such series (which terms shall not be inconsistent with the terms of this Indenture, as amended by any supplemental indenture) including any terms which may be required by or advisable under United States laws or regulations or advisable in connection with the marketing of Securities of that series;

(m) whether the Securities of the series shall be issued in whole or in part in the form of a Global Security or Securities; the terms and conditions, if any, upon which such Global Security or Securities may be exchanged in whole or in part for other individual Securities; and the Depositary for such Global Security or Securities;

(n) whether the Securities will be convertible into or exchangeable for shares of common stock, preferred stock or other securities of the Company or any other Person and, if so, the terms and conditions upon which such Securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at the Company's option or the holders' option) conversion or exchange features, and the applicable conversion or exchange period;

(o) if other than the full 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 6.01;

(p) any additional or alternative events of default;

(q) additional or alternative covenants (which may include, among other restrictions, restrictions on the Company's ability or the ability of the Company's Subsidiaries to: incur additional indebtedness; issue additional securities; create liens; pay dividends or make distributions in respect of the capital stock of the Company or the Company's Subsidiaries; redeem capital stock; place restrictions on the Company's Subsidiaries' ability to pay dividends, make distributions or transfer assets; make investments or other restricted payments; sell or otherwise dispose of assets; enter into sale-leaseback transactions; engage in transactions with stockholders or affiliates; issue or sell stock of the Company's Subsidiaries; or effect a consolidation or merger) or financial covenants (which may include, among other financial covenants, financial covenants that require the Company and its Subsidiaries to maintain specified interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios) provided for with respect to the Securities of the series;

(r) the currency or currencies, including composite currencies, in which payment of the principal of (and premium, if any) and interest, if any, on such Securities shall be payable (if other than the currency of the United States of America), which unless otherwise specified shall be the currency of the United States of America as at the time of payment is legal tender for payment of public or private debts;

(s) if the principal of (and premium, if any) or interest, if any, on such Securities is to be payable, at the election of the Company or any Holder thereof, in a coin or currency other than that in which such Securities are stated to be payable, then the period or periods within which, and the terms and conditions upon which, such election may be made;

(t) whether interest will be payable in cash or additional Securities at the Company's or the Securityholders' option and the terms and conditions upon which the election may be made;

(u) the terms and conditions, if any, upon which the Company shall pay amounts in addition to the stated interest, premium, if any and principal amounts of the Securities of the series to any Securityholder that is not a "United States person" for federal tax purposes;

(v) additional or alternative provisions, if any, related to defeasance and discharge of the offered Securities;

(w) the applicability of any guarantees;

(x) any restrictions on transfer, sale or assignment of the Securities of the series; and

(y) any other terms of the series.

All Securities of any one series shall be substantially identical except as may otherwise be provided in or pursuant to any such Board Resolution or in any indentures supplemental hereto.

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

Securities of any particular series may be issued at various times, with different dates on which the principal or any installment of principal is payable, with different rates of interest, if any, or different methods by which rates of interest may be determined, with different dates on which such interest may be payable and with different redemption dates.

#### **Section 2.02 Form of Securities and Trustee's Certificate.**

The Securities of any series and the Trustee's certificate of authentication to be borne by such Securities shall be substantially of the tenor and purport as set forth in one or more indentures supplemental hereto or as provided in a Board Resolution, and set forth in an Officer's Certificate, and they may have such letters, numbers or other marks of identification or designation and such legends or endorsements printed, lithographed or engraved thereon as the Company may deem appropriate and as are not inconsistent with the provisions of this Indenture, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any securities exchange on which Securities of that series may be listed, or to conform to usage.

#### **Section 2.03 Denominations: Provisions for Payment.**

The Securities shall be issuable as registered Securities and in the denominations of one thousand U.S. dollars (\$1,000) or any integral multiple thereof, subject to Section 2.01(1)(j). The Securities of a particular series shall bear interest payable on the dates and at the rate specified with respect to that series. Subject to Section 2.01(1)(p), the principal of and the interest on the Securities of any series, as well as any premium thereon in case of redemption thereof prior to maturity, shall be payable in the coin or currency of the United States of America that at the time is legal tender for public and private debt, at the office or agency of the Company maintained for that purpose. Each Security shall be dated the date of its authentication. Interest on the Securities shall be computed on the basis of a 360-day year composed of twelve 30-day months.

The interest installment on any Security that is payable, and is punctually paid or duly provided for, on any Interest Payment Date for Securities of that series shall be paid to the Person in whose name said Security (or one or more Predecessor Securities) is registered at the close of business on the regular record date for such interest installment. In the event that any Security of a particular series or portion thereof is called for redemption and the redemption date is subsequent to a regular record date with respect to any Interest Payment Date and prior to such Interest Payment Date, interest on such Security will be paid upon presentation and surrender of such Security as provided in Section 3.03.

Any interest on any Security that is payable, but is not punctually paid or duly provided for, on any Interest Payment Date for Securities of the same series (herein called "Defaulted Interest") shall forthwith cease to be payable to the registered holder on the relevant regular record date by virtue of having been such holder; and such Defaulted Interest shall be paid by the Company, at its election, as provided in clause (1) or clause (2) below:

(1) The Company may make payment of any Defaulted Interest on Securities to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered at the close of business on a special record date for the payment of such Defaulted Interest, which shall be fixed in the following manner: the Company shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each such Security and the date of the proposed payment, and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as in this clause provided. Thereupon the Trustee shall fix a special record date for the payment of such Defaulted Interest which shall not be more than 15 nor less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such special record date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the special record date therefor to be mailed, first class postage prepaid, to each Securityholder at his or her address as it appears in the Security Register (as hereinafter defined), not less than 10 days prior to such special record date. Notice of the proposed payment of such Defaulted Interest and the special record date therefor having been mailed as aforesaid, such Defaulted Interest shall be paid to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered on such special record date.

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

Unless otherwise set forth in a Board Resolution or one or more indentures supplemental hereto establishing the terms of any series of Securities pursuant to Section 2.01 hereof, the term "regular record date" as used in this Section with respect to a series of Securities and any Interest Payment Date for such series shall mean either the fifteenth day of the month immediately preceding the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the first day of a month, or the first day of the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the fifteenth day of a month, whether or not such date is a Business Day.

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

#### **Section 2.04 Execution and Authentications.**

The Securities shall be signed on behalf of the Company by one of its Officers. Signatures may be in the form of a manual or facsimile signature.

The Company may use the facsimile signature of any Person who shall have been an Officer, notwithstanding the fact that at the time the Securities shall be authenticated and delivered or disposed of such Person shall have ceased to be such an officer of the Company. The Securities may contain such notations, legends or endorsements required by law, stock exchange rule or usage. Each Security shall be dated the date of its authentication by the Trustee.

A Security shall not be valid until authenticated manually by an authorized signatory of the Trustee, or by an Authenticating Agent. Such signature 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. At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Securities of any series executed by the Company to the Trustee for authentication, together with a written order of the Company for the authentication and delivery of such Securities, signed by an Officer, and the Trustee in accordance with such written order shall authenticate and deliver such Securities.

In authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall be entitled to receive, if requested, and (subject to Section 7.01) shall be fully protected in relying upon, an Opinion of Counsel stating that the form and terms thereof have been established in conformity with the provisions of this Indenture.

The Trustee shall not be required to authenticate such Securities if the issue of such Securities pursuant to this Indenture will affect the Trustee's own rights, duties or immunities under the Securities and this Indenture or otherwise in a manner that is not reasonably acceptable to the Trustee.

#### **Section 2.05 Registration of Transfer and Exchange.**

(1) Securities of any series may be exchanged upon presentation thereof at the office or agency of the Company designated for such purpose, for other Securities of such series of authorized denominations, and for a like aggregate principal amount, upon payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, all as provided in this Section. In respect of any Securities so surrendered for exchange, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in exchange therefor the Security or Securities of the same series that the Securityholder making the exchange shall be entitled to receive, bearing numbers not contemporaneously outstanding.

(2) The Company shall keep, or cause to be kept, at its office or agency designated for such purpose a register or registers (herein referred to as the "Security Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall register the Securities and the transfers of Securities as in this Article provided and which at all reasonable times shall be open for inspection by the Trustee. The registrar for the purpose of registering Securities and transfer of Securities as herein provided shall be appointed as authorized by Board Resolution (the "Security Registrar").

Upon surrender for transfer of any Security at the office or agency of the Company designated for such purpose, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in the name of the transferee or transferees a new Security or Securities of the same series as the Security presented for a like aggregate principal amount.

All Securities presented or surrendered for exchange or registration of transfer, as provided in this Section, shall be accompanied (if so required by the Company or the Security Registrar) by a written instrument or instruments of transfer, in form satisfactory to the Company or the Security Registrar, duly executed by the registered holder or by such holder's duly authorized attorney in writing.

(3) Except as provided pursuant to Section 2.01 pursuant to a Board Resolution, and set forth in an Officer's Certificate, or established in one or more indentures supplemental to this Indenture, no service charge shall be made for any exchange or registration of transfer of Securities, or issue of new Securities in case of partial redemption of any series, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, other than exchanges pursuant to Section 2.06, Section 3.03(2) and Section 9.04 not involving any transfer.

(4) The Company shall not be required (i) to issue, exchange or register the transfer of any Securities during a period beginning at the opening of business 15 days before the day of the mailing of a notice of redemption of less than all the Outstanding Securities of the same series and ending at the close of business on the day of such mailing, nor (ii) to register the transfer of or exchange any Securities of any series or portions thereof called for redemption, other than the unredeemed portion of any such Securities being redeemed in part. The provisions of this Section 2.05 are, with respect to any Global Security, subject to Section 2.11 hereof.

The Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any Security (including any transfers between or among depository participants or beneficial owners of interests in any Global Security) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

#### **Section 2.06 Temporary Securities.**

Pending the preparation of definitive Securities of any series, the Company may execute, and the Trustee shall authenticate and deliver, temporary Securities (printed, lithographed or typewritten) of any authorized denomination. Such temporary Securities shall be substantially in the form of the definitive Securities in lieu of which they are issued, but with such omissions, insertions and variations as may be appropriate for temporary Securities, all as may be determined by the Company. Every temporary Security of any series shall be executed by the Company and be authenticated by the Trustee upon the same conditions and in substantially the same manner, and with like effect, as the definitive Securities of such series. Without unnecessary delay the Company will execute and will furnish definitive Securities of such series and thereupon any or all temporary Securities of such series may be surrendered in exchange therefor (without charge to the holders), at the office or agency of the Company designated for the purpose, and the Trustee shall authenticate and such office or agency shall deliver in exchange for such temporary Securities an equal aggregate principal amount of definitive Securities of such series, unless the Company advises the Trustee to the effect that definitive Securities need not be executed and furnished until further notice from the Company. Until so exchanged, the temporary Securities of such series shall be entitled to the same benefits under this Indenture as definitive Securities of such series authenticated and delivered hereunder.

#### **Section 2.07 Mutilated, Destroyed, Lost or Stolen Securities.**

In case any temporary or definitive Security shall become mutilated or be destroyed, lost or stolen, the Company (subject to the next succeeding sentence) shall execute, and upon the Company's request the Trustee (subject as aforesaid) shall authenticate and deliver, a new Security of the same series, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated Security, or in lieu of and in substitution for the Security so destroyed, lost or stolen. In every case the applicant for a substituted Security shall furnish to the Company and the Trustee such security or indemnity as may be required by them to save each of them harmless, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Company and the Trustee evidence to their satisfaction of the destruction, loss or theft of the applicant's Security and of the ownership thereof. The Trustee may authenticate any such substituted Security and deliver the same upon the written request or authorization of any officer of the Company. Upon the issuance of any substituted Security, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith.

In case any Security that has matured or is about to mature shall become mutilated or be destroyed, lost or stolen, the Company 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 Security) if the applicant for such payment shall furnish to the Company and the Trustee such security or indemnity as they may require to save them harmless, and, in case of destruction, loss or theft, evidence to the satisfaction of the Company and the Trustee of the destruction, loss or theft of such Security and of the ownership thereof.

Every replacement Security issued pursuant to the provisions of this Section shall constitute an additional contractual obligation of the Company whether or not the mutilated, destroyed, lost or stolen Security shall be found at any time, or be enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of the same series duly issued hereunder. All Securities shall be held and owned upon the express condition that the foregoing provisions are exclusive with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities, and shall preclude (to the extent lawful) any and all other rights or remedies, notwithstanding any law or statute existing or hereafter enacted to the contrary with respect to the replacement or payment of negotiable instruments or other securities without their surrender.

#### **Section 2.08 Cancellation.**

All Securities surrendered for the purpose of payment, redemption, exchange or registration of transfer shall, if surrendered to the Company or any paying agent, be delivered to the Trustee for cancellation, or, if surrendered to the Trustee, shall be cancelled by it, and no Securities shall be issued in lieu thereof except as expressly required or permitted by any of the provisions of this Indenture. On request of the Company at the time of such surrender, the Trustee shall deliver to the Company canceled Securities held by the Trustee. In the absence of such request the Trustee may dispose of canceled Securities in accordance with its standard procedures and deliver a certificate of disposition to the Company. If the Company shall otherwise acquire any of the Securities, however, 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 2.09 Benefits of Indenture.**

Nothing in this Indenture or in the Securities, express or implied, shall give or be construed to give to any Person, other than the parties hereto and the holders of the Securities any legal or equitable right, remedy or claim under or in respect of this Indenture, or under any covenant, condition or provision herein contained; all such covenants, conditions and provisions being for the sole benefit of the parties hereto and of the holders of the Securities.

#### **Section 2.10 Authenticating Agent.**

So long as any of the Securities of any series remain Outstanding there may be an Authenticating Agent for any or all such series of Securities which the Trustee shall have the right to appoint. Said Authenticating Agent shall be authorized to act on behalf of the Trustee to authenticate Securities of such series issued upon exchange, transfer or partial redemption thereof, and Securities so authenticated shall be entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. All references in this Indenture to the authentication of Securities by the Trustee shall be deemed to include authentication by an Authenticating Agent for such series. Each Authenticating Agent shall be acceptable to the Company and shall be a corporation that has a combined capital and surplus, as most recently reported or determined by it, sufficient under the laws of any jurisdiction under which it is organized or in which it is doing business to conduct a trust business, and that is otherwise authorized under such laws to conduct such business and is subject to supervision or examination by federal or state authorities. If at any time any Authenticating Agent shall cease to be eligible in accordance with these provisions, it shall resign immediately.

Any Authenticating Agent may at any time resign by giving written notice of resignation to the Trustee and to the Company. The Trustee may at any time (and upon request by the Company shall) terminate the agency of any Authenticating Agent by giving written notice of termination to such Authenticating Agent and to the Company. Upon resignation, termination or cessation of eligibility of any Authenticating Agent, the Trustee may appoint an eligible successor Authenticating Agent acceptable to the Company. Any successor Authenticating Agent, upon acceptance of its appointment hereunder, shall become vested with all the rights, powers and duties of its predecessor hereunder as if originally named as an Authenticating Agent pursuant hereto.

## **Section 2.11 Global Securities.**

(1) If the Company shall establish pursuant to Section 2.01 that the Securities of a particular series are to be issued as a Global Security, then the Company shall execute and the Trustee shall, in accordance with Section 2.04, authenticate and deliver, a Global Security that (i) shall represent, and shall be denominated in an amount equal to the aggregate principal amount of, all of the Outstanding Securities of such series, (ii) shall be registered in the name of the Depository or its nominee, (iii) shall be delivered by the Trustee to the Depository or pursuant to the Depository's instruction and (iv) shall bear a legend substantially to the following effect: "Except as otherwise provided in Section 2.11 of the Indenture, this Security may be transferred, in whole but not in part, only to another nominee of the Depository or to a successor Depository or to a nominee of such successor Depository."

(2) Notwithstanding the provisions of Section 2.05, the Global Security of a series may be transferred, in whole but not in part and in the manner provided in Section 2.05, only to another nominee of the Depository for such series, or to a successor Depository for such series selected or approved by the Company or to a nominee of such successor Depository.

(3) If at any time the Depository for a series of the Securities notifies the Company that it is unwilling or unable to continue as Depository for such series or if at any time the Depository for such series shall no longer be registered or in good standing under the Exchange Act, or other applicable statute or regulation, and a successor Depository for such series is not appointed by the Company within 90 days after the Company receives such notice or becomes aware of such condition, as the case may be, or if an Event of Default has occurred and is continuing and the Company has received a request from the Depository or from the Trustee, this Section 2.11 shall no longer be applicable to the Securities of such series and the Company will execute, and subject to Section 2.04, the Trustee will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal amount of the Global Security of such series in exchange for such Global Security. In addition, the Company may at any time determine that the Securities of any series shall no longer be represented by a Global Security and that the provisions of this Section 2.11 shall no longer apply to the Securities of such series. In such event the Company will execute and, subject to Section 2.04, the Trustee, upon receipt of an Officer's Certificate evidencing such determination by the Company, will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal amount of the Global Security of such series in exchange for such Global Security. Upon the exchange of the Global Security for such Securities in definitive registered form without coupons, in authorized denominations, the Global Security shall be canceled by the Trustee. Such Securities in definitive registered form issued in exchange for the Global Security pursuant to this Section 2.11(3) shall be registered in such names and in such authorized denominations as the Depository, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. The Trustee shall deliver such Securities to the Depository for delivery to the Persons in whose names such Securities are so registered.

## **ARTICLE 3**

### **REDEMPTION OF SECURITIES AND SINKING FUND PROVISIONS**

#### **Section 3.01 Redemption.**

The Company may redeem the Securities of any series issued hereunder on and after the dates and in accordance with the terms established for such series pursuant to Section 2.01 hereof.

#### **Section 3.02 Notice of Redemption.**

(1) In case the Company shall desire to exercise such right to redeem all or, as the case may be, a portion of the Securities of any series in accordance with any right the Company reserved for itself to do so pursuant to Section 2.01 hereof, the Company shall, or shall cause the Trustee to, give notice of such redemption to holders of the Securities of such series to be redeemed by mailing, first class postage prepaid, a notice of such redemption not less than 30 days and not more than 90 days before the date fixed for redemption of that series to such holders at their last addresses as they shall appear upon the Security Register, unless a shorter period is



specified in the Securities to be redeemed. Any notice that is mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the registered holder receives the notice. In any case, failure duly to give such notice to the holder of any Security of any series designated for redemption in whole or in part, or any defect in the notice, shall not affect the validity of the proceedings for the redemption of any other Securities of such series or any other series. In the case of any redemption of Securities prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture, the Company shall furnish the Trustee with an Officer's Certificate evidencing compliance with any such restriction.

Each such notice of redemption shall specify the date fixed for redemption and the redemption price at which Securities of that series are to be redeemed, and shall state that payment of the redemption price of such Securities to be redeemed will be made at the office or agency of the Company, upon presentation and surrender of such Securities, that interest accrued to the date fixed for redemption will be paid as specified in said notice, that from and after said date interest will cease to accrue and that the redemption is from a sinking fund, if such is the case. If less than all the Securities of a series are to be redeemed, the notice to the holders of Securities of that series to be redeemed in part shall specify the particular Securities to be so redeemed.

In case any Security is to be redeemed in part only, the notice that relates to such Security shall state the portion of the principal amount thereof to be redeemed, and shall state that on and after the redemption date, 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.

(2) If less than all the Securities of a series are to be redeemed, the Company shall give the Trustee at least 45 days' notice (unless a shorter notice shall be satisfactory to the Trustee) in advance of the date fixed for redemption as to the aggregate principal amount of Securities of the series to be redeemed, and thereupon the Trustee shall select, by lot or in such other manner as it shall deem appropriate and fair in its discretion and that may provide for the selection of a portion or portions (equal to one thousand U.S. dollars (\$1,000) or any integral multiple thereof) of the principal amount of such Securities of a denomination larger than \$1,000, the Securities to be redeemed and shall thereafter promptly notify the Company in writing of the numbers of the Securities to be redeemed, in whole or in part. The Company may, if and whenever it shall so elect, by delivery of instructions signed on its behalf by an Officer, instruct the Trustee or any paying agent to call all or any part of the Securities of a particular series for redemption and to give notice of redemption in the manner set forth in this Section, such notice to be in the name of the Company or its own name as the Trustee or such paying agent may deem advisable. In any case in which notice of redemption is to be given by the Trustee or any such paying agent, the Company shall deliver or cause to be delivered to, or permit to remain with, the Trustee or such paying agent, as the case may be, such Security Register, transfer books or other records, or suitable copies or extracts therefrom, sufficient to enable the Trustee or such paying agent to give any notice by mail that may be required under the provisions of this Section.

### **Section 3.03 Payment Upon Redemption.**

(1) If the giving of notice of redemption shall have been completed as above provided, the Securities or portions of Securities of the series to be redeemed 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 interest on such Securities or portions of Securities shall cease to accrue on and after the date fixed for redemption, unless the Company shall default in the payment of such redemption price and accrued interest with respect to any such Security or portion thereof. On presentation and surrender of such Securities on or after the date fixed for redemption at the place of payment specified in the notice, said Securities shall be paid and redeemed at the applicable redemption price for such series, together with interest accrued thereon to the date fixed for redemption (but if the date fixed for redemption is an interest payment date, the interest installment payable on such date shall be payable to the registered holder at the close of business on the applicable record date pursuant to Section 2.03).

(2) Upon presentation of any Security of such series that is to be redeemed in part only, the Company shall execute and the Trustee shall authenticate and the office or agency where the Security is presented shall deliver to the holder thereof, at the expense of the Company, a new Security of the same series of authorized denominations in principal amount equal to the unredeemed portion of the Security so presented.

### **Section 3.04 Sinking Fund.**

The provisions of Sections 3.04, 3.05 and 3.06 shall be applicable to any sinking fund for the retirement of Securities of a series, except as otherwise specified as contemplated by Section 2.01 for Securities of such series.

The minimum amount of any sinking fund payment provided for by the terms of Securities of any series is herein referred to as a “mandatory sinking fund payment,” and any payment in excess of such minimum amount provided for by the terms of Securities of any series is herein referred to as an “optional sinking fund payment”. If provided for by the terms of Securities of any series, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 3.05. Each sinking fund payment shall be applied to the redemption of Securities of any series as provided for by the terms of Securities of such series.

### **Section 3.05 Satisfaction of Sinking Fund Payments with Securities.**

The Company (i) may deliver Outstanding Securities of a series and (ii) may apply as a credit Securities of a series that have been redeemed either at the election of the Company pursuant to the terms of such Securities or through the application of permitted optional sinking fund payments pursuant to the terms of such Securities, in each case in satisfaction of all or any part of any sinking fund payment with respect to the Securities of such series required to be made pursuant to the terms of such Securities as provided for by the terms of such series, provided that such Securities have not been previously so credited. Such Securities shall be received and credited for such purpose by the Trustee at the redemption price specified in such Securities for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly.

### **Section 3.06 Redemption of Securities for Sinking Fund.**

Not less than 45 days prior to each sinking fund payment date for any series of Securities (unless a shorter period shall be satisfactory to the Trustee), the Company will deliver to the Trustee an Officer’s Certificate specifying the amount of the next ensuing sinking fund payment for that series pursuant to the terms of the series, the portion thereof, if any, that is to be satisfied by delivering and crediting Securities of that series pursuant to Section 3.05 and the basis for such credit and will, together with such Officer’s Certificate, deliver to the Trustee any Securities to be so delivered. Not less than 30 days before each such sinking fund payment date the Trustee shall select the Securities to be redeemed upon such sinking fund payment date in the manner specified in Section 3.02 and cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in Section 3.02. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Section 3.03.

## **ARTICLE 4**

### **COVENANTS**

#### **Section 4.01 Payment of Principal, Premium and Interest.**

The Company will duly and punctually pay or cause to be paid the principal of (and premium, if any) and interest on the Securities of that series at the time and place and in the manner provided herein and established with respect to such Securities. Payments of principal on the Securities may be made at the time provided herein and established with respect to such Securities by U.S. dollar check drawn on and mailed to the address of the Securityholder entitled thereto as such address shall appear in the Security Register, or U.S. dollar wire transfer to, a U.S. dollar account if such Securityholder shall have furnished wire instructions to the Trustee no later than 15 days prior to the relevant payment date. Payments of interest on the Securities may be made at the time provided herein and established with respect to such Securities by U.S. dollar check mailed to the address of the Securityholder entitled thereto as such address shall appear in the Security Register, or U.S. dollar wire transfer to, a U.S. dollar account if such Securityholder shall have furnished wire instructions in writing to the Security Registrar and the Trustee no later than 15 days prior to the relevant payment date.

#### **Section 4.02 Maintenance of Office or Agency.**

So long as any series of the Securities remain Outstanding, the Company agrees to maintain an office or agency with respect to each such series and at such other location or locations as may be designated as provided in this Section 4.02, where (i) Securities of that series may be presented for payment, (ii) Securities of that series may be presented as herein above authorized for registration of transfer and exchange, and (iii) notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be given or served, such designation to continue with respect to such office or agency until the Company shall, by written notice signed by any officer authorized to sign an Officer's Certificate and delivered to the Trustee, designate some other office or agency for such purposes or any of them. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, notices and demands. The Company initially appoints the Corporate Trust Office of the Trustee as its paying agent with respect to the Securities.

#### **Section 4.03 Paying Agents.**

(1) If the Company shall appoint one or more paying agents for all or any series of the Securities, other than the Trustee, the Company will cause each 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 held by it as such agent for the payment of the principal of (and premium, if any) or interest on the Securities of that series (whether such sums have been paid to it by the Company or by any other obligor of such Securities) in trust for the benefit of the Persons entitled thereto;

(b) that it will give the Trustee notice of any failure by the Company (or by any other obligor of such Securities) to make any payment of the principal of (and premium, if any) or interest on the Securities of that series when the same shall be due and payable;

(c) that it will, at any time during the continuance of any failure referred to in the preceding paragraph (a)(2) above, upon the written request of the Trustee, forthwith pay to the Trustee all sums so held in trust by such paying agent; and

(d) that it will perform all other duties of paying agent as set forth in this Indenture.

(2) If the Company shall act as its own paying agent with respect to any series of the Securities, it will on or before each due date of the principal of (and premium, if any) or interest on Securities of that series, set aside, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay such principal (and premium, if any) or interest so becoming due on Securities of that series until such sums shall be paid to such Persons or otherwise disposed of as herein provided and will promptly notify the Trustee of such action, or any failure (by it or any other obligor on such Securities) to take such action. Whenever the Company shall have one or more paying agents for any series of Securities, it will, prior to each due date of the principal of (and premium, if any) or interest on any Securities of that series, deposit with the paying agent a sum sufficient to pay the principal (and premium, if any) or interest so becoming due, such sum to be held in trust for the benefit of the Persons entitled to such principal, premium or interest, and (unless such paying agent is the Trustee) the Company will promptly notify the Trustee of this action or failure so to act.

(3) Notwithstanding anything in this Section to the contrary, (i) the agreement to hold sums in trust as provided in this Section is subject to the provisions of Section 11.05, and (ii) the Company may at any time, for the purpose of obtaining the satisfaction and discharge of this Indenture or for any other purpose, pay, or direct any paying agent to pay, to the Trustee all sums held in trust by the Company or such paying agent, such sums to be held by the Trustee upon the same terms and conditions as those upon which such sums were held by the Company or such paying agent; and, upon such payment by the Company or any paying agent to the Trustee, the Company or such paying agent shall be released from all further liability with respect to such money.

#### **Section 4.04 Appointment to Fill Vacancy in Office of Trustee.**

The Company, whenever necessary to avoid or fill a vacancy in the office of Trustee, will appoint, in the manner provided in Section 7.10, a Trustee, so that there shall at all times be a Trustee hereunder.

#### **Section 4.05 Compliance with Consolidation Provisions.**

The Company will not, while any of the Securities remain Outstanding, consolidate with or merge into any other Person, in either case where the Company is not the survivor of such transaction, or sell or convey all or substantially all of its property to any other Person unless the provisions of Article Ten hereof are complied with.

### **ARTICLE 5**

#### **SECURITYHOLDERS' LISTS AND REPORTS BY THE COMPANY AND THE TRUSTEE**

##### **Section 5.01 Company to Furnish Trustee Names and Addresses of Securityholders.**

The Company will furnish or cause to be furnished to the Trustee (a) within 15 days after each regular record date (as defined in Section 2.03) a list, in such form as the Trustee may reasonably require, of the names and addresses of the holders of each series of Securities as of such regular record date, provided that the Company shall not be obligated to furnish or cause to furnish such list at any time that the list shall not differ in any respect from the most recent list furnished to the Trustee by the Company and (b) at such other times as the Trustee may request in writing within 30 days after the receipt by the Company of any such request, a list of similar form and content as of a date not more than 15 days prior to the time such list is furnished; provided, however, that, in either case, no such list need be furnished for any series for which the Trustee shall be the Security Registrar.

##### **Section 5.02 Preservation Of Information; Communications With Securityholders.**

(1) The Trustee shall preserve, in as current a form as is reasonably practicable, all information as to the names and addresses of the holders of Securities contained in the most recent list furnished to it as provided in Section 5.01 and as to the names and addresses of holders of Securities received by the Trustee in its capacity as Security Registrar (if acting in such capacity).

(2) The Trustee may destroy any list furnished to it as provided in Section 5.01 upon receipt of a new list so furnished.

(3) Securityholders may communicate as provided in Section 312(b) of the Trust Indenture Act with other Securityholders with respect to their rights under this Indenture or under the Securities, and, in connection with any such communications, the Trustee shall satisfy its obligations under Section 312(b) of the Trust Indenture Act in accordance with the provisions of Section 312(b) of the Trust Indenture Act.

##### **Section 5.03 Reports by the Company.**

(1) The Company covenants and agrees to provide (which delivery may be via electronic mail) to the Trustee within 30 days, after the Company files the same with the Commission, copies of the annual reports and of the information, documents and other reports (or copies of such portions of any of the foregoing as the Commission may from time to time by rules and regulations prescribe) that the Company is required to file with the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act; provided, however, the Company shall not be required to deliver to the Trustee any materials for which the Company has sought and received confidential treatment by the Commission; and provided further, that so long as such filings by the Company are available on the Commission's Electronic Data Gathering, Analysis and Retrieval System (EDGAR), or Interactive Data Electronic Applications (IDEA), or any successor system, such filings shall be deemed to have been filed with the Trustee for purposes hereof without any further action required by the Company; provided that an electronic link to such filing, together with an electronic notice of such filing have been sent to the Trustee. For the avoidance of doubt, a failure by the Company to file annual reports, information and other reports with the SEC within the time period prescribed thereof by the Commission shall not be deemed a breach of this Section 5.03.

(2) Delivery of reports, information and documents to the Trustee under Section 5.03 is for informational purposes only and the information and the Trustee's receipt of the foregoing shall not constitute constructive notice of any information contained therein, or determinable from information contained therein including the Company's compliance with any of their covenants thereunder (as to which the Trustee is entitled to rely exclusively on an Officer's Certificate).

#### **Section 5.04 Reports by the Trustee.**

(1) If required by Section 313(a) of the Trust Indenture Act, the Trustee, within sixty (60) days after each May 1, shall transmit by mail, first class postage prepaid, to the Securityholders, as their names and addresses appear upon the Security Register, a brief report dated as of such May 1, which complies with Section 313(a) of the Trust Indenture Act.

(2) The Trustee shall comply with Section 313(b) and 313(c) of the Trust Indenture Act.

(3) A copy of each such report shall, at the time of such transmission to Securityholders, be filed by the Trustee with the Company, with each securities exchange upon which any Securities are listed (if so listed) and also with the Commission. The Company agrees to notify the Trustee when any Securities become listed on any securities exchange.

### **ARTICLE 6**

#### **REMEDIES OF THE TRUSTEE AND SECURITYHOLDERS ON EVENT OF DEFAULT**

##### **Section 6.01 Events of Default.**

(1) Whenever used herein with respect to Securities of a particular series, "Event of Default" means any one or more of the following events that has occurred and is continuing:

(a) the Company defaults in the payment of any installment of interest upon any of the Securities of that series, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by the Company in accordance with the terms of any indenture supplemental hereto shall not constitute a default in the payment of interest for this purpose;

(b) the Company defaults in the payment of the principal of (or premium, if any, on) any of the Securities of that series as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to that series; provided, however, that a valid extension of the maturity of such Securities in accordance with the terms of any indenture supplemental hereto shall not constitute a default in the payment of principal or premium, if any;

(c) the Company fails to observe or perform any other of its covenants or agreements with respect to that series contained in this Indenture or otherwise established with respect to that series of Securities pursuant to Section 2.01 hereof (other than a covenant or agreement that has been expressly included in this Indenture solely for the benefit of one or more series of Securities other than such series) for a period of 90 days after the date on which written notice of such failure, requiring the same to be remedied and stating that such notice is a "Notice of Default" hereunder, shall have been given to the Company by the Trustee, by registered or certified mail, or to the Company and the Trustee by the holders of at least 25% in principal amount of the Securities of that series at the time Outstanding;

(d) the Company pursuant to or within the meaning of any Bankruptcy Law (i) commences a voluntary case, (ii) consents to the entry of an order for relief against it in an involuntary case, (iii) consents to the appointment of a Custodian of it or for all or substantially all of its property or (iv) makes a general assignment for the benefit of its creditors; or

(e) a court of competent jurisdiction enters an order under any Bankruptcy Law that (i) is for relief against the Company in an involuntary case, (ii) appoints a Custodian of the Company for all or substantially all of its property or (iii) orders the liquidation of the Company, and the order or decree remains unstayed and in effect for 90 days.

(2) In each and every such case (other than an Event of Default specified in clause (4) or clause (5) above), unless the principal of all the Securities of that 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 that series then Outstanding hereunder, by notice in writing to the Company (and to the Trustee if given by such Securityholders), may declare the principal of (and premium, if any, on) and accrued and unpaid interest on all the Securities of that series to be due and payable immediately, and upon any such declaration the same shall become and shall be immediately due and payable. If an Event of Default specified in clause (4) or clause (5) above occurs, the principal of and accrued and unpaid interest on all the Securities of that series shall automatically be immediately due and payable without any declaration or other act on the part of the Trustee or the holders of the Securities.

(3) At any time after the principal of (and premium, if any, on) and accrued and unpaid interest on the Securities of that series shall have been so declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered as hereinafter provided, the holders of a majority in aggregate principal amount of the Securities of that series then Outstanding hereunder, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if: (i) the Company has paid or deposited with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of that series and the principal of (and premium, if any, on) any and all Securities of that series that shall have become due otherwise than by acceleration (with interest upon such principal and premium, if any, and, to the extent that such payment is enforceable under applicable law, upon overdue installments of interest, at the rate per annum expressed in the Securities of that series to the date of such payment or deposit) and the amount payable to the Trustee under Section 7.06, and (ii) any and all Events of Default under the Indenture with respect to such series, other than the nonpayment of principal on (and premium, if any, on) and accrued and unpaid interest on Securities of that series that shall not have become due by their terms, shall have been remedied or waived as provided in Section 6.06.

No such rescission and annulment shall extend to or shall affect any subsequent default or impair any right consequent thereon.

(4) In case the Trustee shall have proceeded to enforce any right with respect to Securities of that series under this Indenture and such proceedings shall have been discontinued or abandoned because of such rescission or annulment or for any other reason or shall have been determined adversely to the Trustee, then and in every such case, subject to any determination in such proceedings, the Company and the Trustee shall be restored respectively to their former positions and rights hereunder, and all rights, remedies and powers of the Company and the Trustee shall continue as though no such proceedings had been taken.

#### **Section 6.02 Collection of Indebtedness and Suits for Enforcement by Trustee.**

(1) The Company covenants that (i) in case it shall default in the payment of any installment of interest on any of the Securities of a series, or in any payment required by any sinking or analogous fund established with respect to that series as and when the same shall have become due and payable, and such default shall have continued for a period of 90 days, or (ii) in case it shall default in the payment of the principal of (or premium, if any, on) any of the Securities of a series when the same shall have become due and payable, whether upon maturity of the Securities of a series or upon redemption or upon declaration or otherwise then, upon demand of the Trustee, the Company will pay to the Trustee, for the benefit of the holders of the Securities of that series, the whole amount that then shall have been become due and payable on all such Securities for principal (and premium,

if any) or interest, or both, as the case may be, with interest upon the overdue principal (and premium, if any) and (to the extent that payment of such interest is enforceable under applicable law) upon overdue installments of interest at the rate per annum expressed in the Securities of that series; and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, and the amount payable to the Trustee under Section 7.06.

(2) If the Company shall fail to pay such amounts forthwith 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 proceeding to judgment or final decree, and may enforce any such judgment or final decree against the Company or other obligor upon the Securities of that series and collect the moneys adjudged or decreed to be payable in the manner provided by law or equity out of the property of the Company or other obligor upon the Securities of that series, wherever situated.

(3) In case of any receivership, insolvency, liquidation, bankruptcy, reorganization, readjustment, arrangement, composition or judicial proceedings affecting the Company, or its creditors or property, the Trustee shall have power to intervene in such proceedings and take any action therein that may be permitted by the court and shall (except as may be otherwise provided by law) be entitled to file such proofs of claim and other papers and documents as may be necessary or advisable in order to have the claims of the Trustee and of the holders of Securities of such series allowed for the entire amount due and payable by the Company under the Indenture at the date of institution of such proceedings and for any additional amount that may become due and payable by the Company after such date, and to collect and receive any moneys or other property payable or deliverable on any such claim, and to distribute the same after the deduction of the amount payable to the Trustee under Section 7.06; and any receiver, assignee or trustee in bankruptcy or reorganization is hereby authorized by each of the holders of Securities of such series to make such payments to the Trustee, and, in the event that the Trustee shall consent to the making of such payments directly to such Securityholders, to pay to the Trustee any amount due it under Section 7.06.

(4) All rights of action and of asserting claims under this Indenture, or under any of the terms established with respect to Securities of that series, may be enforced by the Trustee without the possession of any of such Securities, or the production thereof at any trial or other proceeding relative thereto, and any such suit or proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for payment to the Trustee of any amounts due under Section 7.06, be for the ratable benefit of the holders of the Securities of such series.

In case of an Event of Default hereunder, the Trustee may in its discretion proceed to protect and enforce the rights vested in it by this Indenture by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any of such rights, either at law or in equity or in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in the 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.

Nothing contained herein shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Securityholder any plan of reorganization, arrangement, adjustment or composition affecting the Securities of that 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.

### **Section 6.03 Application of Moneys Collected.**

Any moneys collected by the Trustee pursuant to this Article with respect to a particular series of Securities shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such moneys on account of principal (or premium, if any) or interest, upon presentation of the Securities of that series, and notation thereon of the payment, if only partially paid, and upon surrender thereof if fully paid:

FIRST: To the payment of reasonable costs and expenses of collection and of all amounts payable to the Trustee under Section 7.06;

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

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

#### **Section 6.04 Limitation on Suits.**

No holder of any Security of any series shall have any right by virtue or by availing of any provision of this Indenture or any Security to institute any suit, action or proceeding in equity or at law upon or under or with respect to this Indenture, any Security or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless (i) such holder previously shall have given to the Trustee written notice of an Event of Default and of the continuance thereof with respect to the Securities of such series specifying such Event of Default, as hereinbefore provided; (ii) 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, suit or proceeding in its own name as Trustee hereunder; (iii) such holder or holders shall have offered to the Trustee such reasonable indemnity as it may require against the costs, expenses and liabilities to be incurred therein or thereby; (iv) the Trustee for 90 days after its receipt of such notice, request and offer of indemnity, shall have failed to institute any such action, suit or proceeding and (v) during such 90 day period, the holders of a majority in principal amount of the Securities of that series do not give the Trustee a direction inconsistent with the request.

Notwithstanding anything contained herein to the contrary or any other provisions of this Indenture, the right of any holder of any Security to receive payment of the principal of (and premium, if any) and interest on such Security, as therein provided, on or after the respective due dates expressed in such Security (or in the case of redemption, on the redemption date), or to institute suit for the enforcement of any such payment on or after such respective dates or redemption date, shall not be impaired or affected without the consent of such holder and by accepting a Security hereunder it is expressly understood, intended and covenanted by the taker and holder of every Security of such series with every other such taker and holder and the Trustee, that no one or more holders of Securities of such series shall have any right in any manner whatsoever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of the holders of any other of such 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 such 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 6.05 Rights and Remedies Cumulative; Delay or Omission Not Waiver.**

(1) Except as otherwise provided in Section 2.07, all powers and remedies given by this Article to the Trustee or to the Securityholders shall, to the extent permitted by law, be deemed cumulative and not exclusive of any other powers and remedies available to the Trustee or the holders of the Securities, by judicial proceedings or otherwise, to enforce the performance or observance of the covenants and agreements contained in this Indenture or otherwise established with respect to such Securities.

(2) No delay or omission of the Trustee or of any holder of any of the Securities to exercise any right or power accruing upon any Event of Default occurring and continuing as aforesaid shall impair any such right or power, or shall be construed to be a waiver of any such default or an acquiescence therein; and, subject to the provisions of Section 6.04, every power and remedy given by this Article or by law to the Trustee or 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 6.06 Control by Securityholders.**

The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding, determined in accordance with Section 8.04, 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 such series; provided, however, that such direction shall not be in conflict with any rule of law or with this Indenture or subject the Trustee in its sole discretion to personal liability. Subject to the provisions of Section 7.01, the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall, by a Responsible Officer or officers of the Trustee, determine that the proceeding so directed, subject to the Trustee's duties under the Trust Indenture Act, would involve the Trustee in personal liability or might be unduly prejudicial to the Securityholders not involved in the proceeding. The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding affected thereby, determined in accordance with Section 8.04, may on behalf of the holders of all of the Securities of such series waive any past default in the performance of any of the covenants contained herein or established pursuant to Section 2.01 with respect to such series and its consequences, except a default in the payment of the principal of, or premium, if any, or interest on, any of the Securities of that series as and when the same shall become due by the terms of such Securities otherwise than by acceleration (unless such default has been cured and a sum sufficient to pay all matured installments of interest and principal and any premium has been deposited with the Trustee (in accordance with Section 6.01(3)). Upon any such waiver, the default covered thereby shall be deemed to be cured for all purposes of this Indenture and the Company, the Trustee and the holders of the Securities of such series shall be restored to their former positions and rights hereunder, respectively; but no such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

### **Section 6.07 Undertaking to Pay Costs.**

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

## **ARTICLE 7**

### **CONCERNING THE TRUSTEE**

#### **Section 7.01 Certain Duties and Responsibilities of Trustee.**

(1) The Trustee, prior to the occurrence of an Event of Default with respect to the Securities of a series and after the curing of all Events of Default with respect to the Securities of that series that may have occurred, shall undertake to perform with respect to the Securities of such series such duties and only such duties as are specifically set forth in this Indenture, and no implied covenants shall be read into this Indenture against the Trustee. In case an Event of Default with respect to the Securities of a series has occurred (that has not been cured or waived), the Trustee shall exercise with respect to Securities of that series 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 man would exercise or use under the circumstances in the conduct of his own affairs.

(2) 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:

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

(A) the duties and obligations of the Trustee shall with respect to the Securities of such series be determined solely by the express provisions of this Indenture, and the Trustee shall not be liable with respect to the Securities of such series 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

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

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

(c) the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the holders of not less than a majority in principal amount of the Securities of any series at the time Outstanding relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee under this Indenture with respect to the Securities of that series; and

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

### **Section 7.02 Certain Rights of Trustee.**

Except as otherwise provided in Section 7.01:

(1) The Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond, 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;

(2) Any request, direction, order or demand of the Company mentioned herein shall be sufficiently evidenced by a Board Resolution or an instrument signed in the name of the Company by any authorized officer of the Company (unless other evidence in respect thereof is specifically prescribed herein);

(3) The Trustee may consult with counsel and the written advice of such counsel or, if requested, any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken or suffered or omitted hereunder in good faith and in reliance thereon;

(4) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Securityholders pursuant to the provisions of this Indenture, unless such Securityholders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities that may be incurred therein or thereby; nothing contained herein shall, however, relieve the Trustee of the obligation, upon the occurrence of an Event of Default with respect to a series of the Securities (that has not been cured or waived), to exercise with respect to Securities of that series such of the rights and powers vested in it by this Indenture, and to use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his own affairs;

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

(6) The Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond, security, or other papers or documents, unless requested in writing so to do by the holders of not less than a majority in principal amount of the Outstanding Securities of the particular series affected thereby (determined as provided in Section 8.04); provided, however, that if the payment within a reasonable time to the Trustee of the costs, expenses or liabilities likely to be incurred by it in the making of such investigation is, in the opinion of the Trustee, not reasonably assured to the Trustee by the security afforded to it by the terms of this Indenture, the Trustee may require reasonable indemnity against such costs, expenses or liabilities as a condition to so proceeding. The reasonable expense of every such examination shall be paid by the Company or, if paid by the Trustee, shall be repaid by the Company upon demand;

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

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

(9) In no event shall the Trustee be responsible or liable for special, indirect, or consequential loss or damage of any kind whatsoever (including, but not limited to, loss of profit) irrespective of whether the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action; and

(10) The Trustee agrees to accept and act upon instructions or directions pursuant to this Indenture sent by unsecured e-mail, facsimile transmission or other similar unsecured electronic methods; provided, however, that (a) the party providing such written instructions, subsequent to such transmission of written instructions, shall provide the originally executed instructions or directions to the Trustee in a timely manner, and (b) such originally executed instructions or directions shall be signed by an authorized representative of the party providing such instructions or directions. If the party elects to give the Trustee e-mail or facsimile instructions (or instructions by a similar electronic method) and the Trustee in its discretion elects to act upon such instructions, the Trustee's understanding of such instructions shall be deemed controlling. The Trustee shall not be liable for any losses, costs or expenses arising directly or indirectly from the Trustee's reliance upon and compliance with such instructions notwithstanding such instructions conflict or are inconsistent with a subsequent written instruction. The party providing electronic instructions agrees to assume all risks arising out of the use of such electronic methods to submit instructions and directions to the Trustee, including without limitation the risk of the Trustee acting on unauthorized instructions, and the risk of interception and misuse by third parties.

In addition, the Trustee shall not be deemed to have knowledge of any Default or Event of Default until the Trustee shall have received written notification in the manner set forth in this Indenture or a Responsible Officer of the Trustee shall have obtained actual knowledge.

### **Section 7.03 Trustee Not Responsible for Recitals or Issuance or Securities.**

(1) The recitals contained herein and in the Securities shall be taken as the statements of the Company, and the Trustee assumes no responsibility for the correctness of the same.

(2) The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Securities.

The Trustee shall not be accountable for the use or application by the Company of any of the Securities or of the proceeds of such Securities, or for the use or application of any moneys paid over by the Trustee in accordance with any provision of this Indenture or established pursuant to Section 2.01, or for the use or application of any moneys received by any paying agent other than the Trustee.

### **Section 7.04 May Hold Securities.**

The Trustee or any paying agent or Security Registrar, 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 Trustee, paying agent or Security Registrar.

### **Section 7.05 Moneys Held in Trust.**

Subject to the provisions of Section 11.05, all moneys received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received, but need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for interest on any moneys received by it hereunder except such as it may agree with the Company to pay thereon.

### **Section 7.06 Compensation and Reimbursement.**

(1) The Company covenants and agrees to pay to the Trustee, and the Trustee shall be entitled to, such reasonable compensation (which shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust) as the Company and the Trustee may from time to time agree in writing, for all services rendered by it in the execution of the trusts hereby created and in the exercise and performance of any of the powers and duties hereunder of the Trustee, and, except as otherwise expressly provided herein, the Company will pay or reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by the Trustee 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 Persons not regularly in its employ), except any such expense, disbursement or advance as may arise from its negligence or bad faith and except as the Company and Trustee may from time to time agree in writing. The Company also covenants to indemnify the Trustee (and its officers, agents, directors and employees) for, and to hold it harmless against, any loss, liability or expense incurred without negligence or bad faith on the part of the Trustee and arising out of or in connection with the acceptance or administration of this trust, including the reasonable costs and expenses of defending itself against any claim of liability in the premises.

(2) The obligations of the Company under this Section to compensate and indemnify the Trustee and to pay or reimburse the Trustee for reasonable expenses, disbursements and advances shall constitute additional indebtedness hereunder. Such additional indebtedness shall be secured by a lien prior 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.

(3) To ensure the Company's payment obligations in this Section, the Trustee shall have a lien prior to the Securities on all funds or property held or collected by the Trustee, except that held in trust to pay principal of or interest on particular Securities. When the Trustee incurs expenses or renders services in connection with an Event of Default specified in Section 6.01(1)(d) or (1)(e), the expenses (including the reasonable fees and expenses of its counsel) and the compensation for services in connection therewith are to constitute expenses of administration under any bankruptcy law. The provisions of this Section 7.06 shall survive the termination of this Indenture and the resignation or removal of the Trustee.

**Section 7.07 Reliance on Officer's Certificate.**

Except as otherwise provided in Section 7.01, whenever in the administration of the provisions of this Indenture the Trustee shall deem it reasonably necessary or desirable that a matter be proved or established prior to taking or suffering or omitting to take any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of negligence or bad faith on the part of the Trustee, be deemed to be conclusively proved and established by an Officer's Certificate delivered to the Trustee and such certificate, in the absence of negligence or bad faith on the part of the Trustee, shall be full warrant to the Trustee for any action taken, suffered or omitted to be taken by it under the provisions of this Indenture upon the faith thereof.

**Section 7.08 Disqualification; Conflicting Interests.**

If the Trustee has or shall acquire any "conflicting interest" within the meaning of Section 310(b) of the Trust Indenture Act, the Trustee and the Company shall in all respects comply with the provisions of Section 310(b) of the Trust Indenture Act.

**Section 7.09 Corporate Trustee Required; Eligibility.**

There shall at all times be a Trustee with respect to the Securities issued hereunder which shall at all times be a corporation organized and doing business under the laws of the United States of America or any state or territory thereof or of the District of Columbia, or a corporation or other Person permitted to act as trustee by the Commission, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least fifty million U.S. dollars (\$50,000,000), and subject to supervision or examination by federal, state, territorial, or District of Columbia authority.

If such corporation or other Person publishes reports of condition at least annually, pursuant to law or to the requirements of the aforesaid supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation or other Person shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. The Company may not, nor may any Person directly or indirectly controlling, controlled by, or under common control with the Company, serve as Trustee. In case at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section, the Trustee shall resign immediately in the manner and with the effect specified in Section 7.10.

**Section 7.10 Resignation and Removal; Appointment of Successor.**

(1) The Trustee or any successor hereafter appointed may at any time resign with respect to the Securities of one or more series by giving written notice thereof to the Company and by transmitting notice of resignation by mail, first class postage prepaid, to the Securityholders of such series, as their names and addresses appear upon the Security Register. Upon receiving such notice of resignation, the Company shall promptly appoint a successor trustee with respect to Securities of such series by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee. If no successor trustee shall have been so appointed and have accepted appointment within 30 days after the mailing of such notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor trustee with respect to Securities of such series, or any Securityholder of that series who has been a bona fide holder of a Security or Securities for at least six months may 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.

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

(a) the Trustee shall fail to comply with the provisions of Section 7.08 after written request therefor by the Company or by any Securityholder who has been a bona fide holder of a Security or Securities for at least six months; or

(b) the Trustee shall cease to be eligible in accordance with the provisions of Section 7.09 and shall fail to resign after written request therefor by the Company or by any such Securityholder; or

(c) the Trustee shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or commence a voluntary bankruptcy proceeding, or a receiver of the Trustee or of its property shall be appointed or consented to, 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 Company may remove the Trustee with respect to all Securities and appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor trustee, or any Securityholder who has been a bona fide holder of a Security or Securities for at least six months may, on behalf of that holder and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee. Such court may thereupon after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(3) The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding may at any time remove the Trustee with respect to such series by so notifying the Trustee and the Company and may appoint a successor Trustee for such series with the consent of the Company.

(4) Any resignation or removal of the Trustee and appointment of a successor trustee with respect to the Securities of a series pursuant to any of the provisions of this Section shall become effective upon acceptance of appointment by the successor trustee as provided in Section 7.11.

(5) Any successor trustee appointed pursuant to this Section may be appointed with respect to the Securities of one or more series or all of such series, and at any time there shall be only one Trustee with respect to the Securities of any particular series.

#### **Section 7.11 Acceptance of Appointment By Successor.**

(1) In case of the appointment hereunder of a successor trustee with respect to all Securities, every such successor trustee so appointed shall execute, acknowledge and deliver to the Company and to the retiring Trustee an instrument accepting such appointment, and thereupon the resignation or removal of the retiring Trustee shall become effective and such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee; but, on the request of the Company or the successor trustee, such retiring Trustee shall, upon payment of its charges, execute and deliver an instrument transferring to such successor trustee all the rights, powers, and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor trustee all property and money held by such retiring Trustee hereunder.

(2) In case of the appointment hereunder of a successor trustee with respect to the Securities of one or more (but not all) series, the Company, the retiring Trustee and each successor trustee with respect to the Securities of one or more series shall execute and deliver an indenture supplemental hereto wherein each successor trustee shall accept such appointment and which (i) shall contain such provisions as shall be necessary or desirable to transfer and confirm to, and to vest in, each successor trustee all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates, (ii) shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series as to which the retiring Trustee is not retiring shall continue to be vested in the retiring Trustee, and (iii) 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, that each such Trustee shall be trustee of a trust or trusts hereunder separate and apart from any trust or trusts hereunder administered by any other such Trustee and that no Trustee shall be responsible for any act or failure to act on the part of any other Trustee hereunder; and upon the execution and delivery of such supplemental indenture the resignation or removal of the retiring Trustee shall become effective to the extent provided therein, such retiring Trustee shall with respect to the Securities of that or those series to which the appointment of such successor trustee relates have no further responsibility for the exercise of rights and powers or for the performance of the duties and obligations vested in the Trustee under this Indenture, and each such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates; but, on request of the Company or any successor trustee, such retiring Trustee shall duly assign, transfer and deliver to such successor trustee, to the extent contemplated by such supplemental indenture, the property and money held by such retiring Trustee hereunder with respect to the Securities of that or those series to which the appointment of such successor trustee relates.

(3) Upon request of any such successor trustee, the Company shall execute any and all instruments for more fully and certainly vesting in and confirming to such successor trustee all such rights, powers and trusts referred to in paragraph (a) or (b) of this Section, as the case may be.

(4) No successor trustee shall accept its appointment unless at the time of such acceptance such successor trustee shall be qualified and eligible under this Article.

(5) Upon acceptance of appointment by a successor trustee as provided in this Section, the Company shall transmit notice of the succession of such trustee hereunder by mail, first class postage prepaid, to the Securityholders, as their names and addresses appear upon the Security Register. If the Company fails to transmit such notice within ten days after acceptance of appointment by the successor trustee, the successor trustee shall cause such notice to be transmitted at the expense of the Company.

#### **Section 7.12 Merger, Conversion, Consolidation or Succession to Business.**

Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to the corporate trust business of the Trustee, including the administration of the trust created by this Indenture, shall be the successor of the Trustee hereunder, provided that such corporation shall be qualified under the provisions of Section 7.08 and eligible under the provisions of Section 7.09, 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 any Securities shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to such authenticating Trustee may adopt such authentication and deliver the Securities so authenticated with the same effect as if such successor Trustee had itself authenticated such Securities.

#### **Section 7.13 Preferential Collection of Claims Against the Company.**

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

#### **Section 7.14 Notice of Default**

If any Event of Default occurs and is continuing and if such Event of Default is known to a Responsible Officer of the Trustee, the Trustee shall mail to each Securityholder in the manner and to the extent provided in Section 313(c) of the Trust Indenture Act notice of the Event of Default within the earlier of 90 days after it occurs and 30 days after it is known to a Responsible Officer of the Trustee or written notice of it is received by the Trustee, unless such Event of Default has been cured; *provided, however*, that, except in the case of a default in the

payment of the principal of (or premium, if any) or interest on any Security, 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 and/or Responsible Officers of the Trustee in good faith determine that the withholding of such notice is in the interest of the Securityholders.

## ARTICLE 8

### CONCERNING THE SECURITYHOLDERS

#### **Section 8.01 Evidence of Action by Securityholders.**

Whenever in this Indenture it is provided that the holders of a majority or specified percentage in aggregate principal amount of the Securities of a particular series may take any action (including the making of any demand or request, the giving of any notice, consent or waiver or the taking of any other action), the fact that at the time of taking any such action the holders of such majority or specified percentage of that series have joined therein may be evidenced by any instrument or any number of instruments of similar tenor executed by such holders of Securities of that series in person or by agent or proxy appointed in writing.

If the Company shall solicit from the Securityholders of any series any request, demand, authorization, direction, notice, consent, waiver or other action, the Company may, at its option, as evidenced by an Officer's Certificate, fix in advance a record date for such series for the determination of Securityholders entitled to give such request, demand, authorization, direction, notice, consent, waiver or other action, but the Company shall have no obligation to do so. If such a record date is fixed, such request, demand, authorization, direction, notice, consent, waiver or other action may be given before or after the record date, but only the Securityholders of record at the close of business on the record date shall be deemed to be Securityholders for the purposes of determining whether Securityholders of the requisite proportion of Outstanding Securities of that series have authorized or agreed or consented to such request, demand, authorization, direction, notice, consent, waiver or other action, and for that purpose the Outstanding Securities of that series shall be computed as of the record date; provided, however, that no such authorization, agreement or consent by such Securityholders on the record date shall be deemed effective unless it shall become effective pursuant to the provisions of this Indenture not later than six months after the record date.

#### **Section 8.02 Proof of Execution by Securityholders.**

Subject to the provisions of Section 7.01, proof of the execution of any instrument by a Securityholder (such proof will not require notarization) or his agent or proxy and proof of the holding by any Person of any of the Securities shall be sufficient if made in the following manner:

(1) The fact and date of the execution by any such Person of any instrument may be proved in any reasonable manner acceptable to the Trustee.

(2) The ownership of Securities shall be proved by the Security Register of such Securities or by a certificate of the Security Registrar thereof.

The Trustee may require such additional proof of any matter referred to in this Section as it shall deem necessary.

#### **Section 8.03 Who May be Deemed Owners.**

Prior to the due presentment for registration of transfer of any Security, the Company, the Trustee, any paying agent and any Security Registrar may deem and treat the Person in whose name such Security shall be registered upon the books of the Company as the absolute owner of such Security (whether or not such Security shall be overdue and notwithstanding any notice of ownership or writing thereon made by anyone other than the Security Registrar) for the purpose of receiving payment of or on account of the principal of, premium, if any, and (subject to Section 2.03) interest on such Security and for all other purposes; and neither the Company nor the Trustee nor any paying agent nor any Security Registrar shall be affected by any notice to the contrary.



#### **Section 8.04 Certain Securities Owned by Company Disregarded.**

In determining whether the holders of the requisite aggregate principal amount of Securities of a particular series have concurred in any direction, consent or waiver under this Indenture, the Securities of that series that are owned by the Company or any other obligor on the Securities of that series or by any Person directly or indirectly controlling or controlled by or under common control with the Company or any other obligor on the Securities of that series 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 of such series that the Trustee actually knows are so owned shall be so disregarded. The Securities so owned that have been pledged in good faith may be regarded as Outstanding for the purposes of this Section, if the pledgee shall establish to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not a Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Company or any such other obligor. In case of a dispute as to such right, any decision by the Trustee taken upon the advice of counsel shall be full protection to the Trustee.

#### **Section 8.05 Actions Binding on Future Securityholders.**

At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 8.01, of the taking of any action by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action, any holder of a Security of that series that is shown by the evidence to be included in the Securities the holders of which have consented to such action may, by filing written notice with the Trustee, and upon proof of holding as provided in Section 8.02, 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 Security issued in exchange therefor, on registration of transfer thereof or in place thereof, irrespective of whether or not any notation in regard thereto is made upon such Security. Any action taken by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action shall be conclusively binding upon the Company, the Trustee and the holders of all the Securities of that series.

### **ARTICLE 9**

#### **SUPPLEMENTAL INDENTURES**

##### **Section 9.01 Supplemental Indentures Without the Consent of Securityholders.**

In addition to any supplemental indenture otherwise authorized by this Indenture, the Company and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect), without the consent of the Securityholders, for one or more of the following purposes:

- (1) to cure any ambiguity, defect, or inconsistency herein or in the Securities of any series;
- (2) to comply with Article Ten;
- (3) to provide for uncertificated Securities in addition to or in place of certificated Securities;

(4) to add to the covenants, restrictions, conditions or provisions relating to the Company for the benefit of the holders of all or any series of Securities (and if such covenants, restrictions, conditions or provisions are to be for the benefit of less than all series of Securities, stating that such covenants, restrictions, conditions or provisions are expressly being included solely for the benefit of such series), to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an Event of Default, or to surrender any right or power herein conferred upon the Company;

(5) to add to, delete from, or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication, and delivery of Securities, as herein set forth;

(6) to make any change that does not adversely affect the rights of any Securityholder in any material respect;

(7) to provide for the issuance of and establish the form and terms and conditions of the Securities of any series as provided in Section 2.01, to establish the form of any certifications required to be furnished pursuant to the terms of this Indenture or any series of Securities, or to add to the rights of the holders of any series of Securities;

(8) to evidence and provide for the acceptance of appointment hereunder by a successor trustee; or

(9) to comply with any requirements of the Commission or any successor in connection with the qualification of this Indenture under the Trust Indenture Act.

The Trustee is hereby authorized to join with the Company in the execution of any such supplemental indenture, and to make any further appropriate agreements and stipulations that may be therein contained, but the Trustee shall not be obligated to enter into any such supplemental indenture that 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 by the Company and the Trustee without the consent of the holders of any of the Securities at the time Outstanding, notwithstanding any of the provisions of Section 9.02.

#### **Section 9.02 Supplemental Indentures With Consent of Securityholders.**

With the consent (evidenced as provided in Section 8.01) of the holders of not less than a majority in aggregate principal amount of the Securities of each series affected by such supplemental indenture or indentures at the time Outstanding, the Company, when authorized by a Board Resolution, and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect) 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 not covered by Section 9.01 the rights of the holders of the Securities of such series under this Indenture; provided, however, that no such supplemental indenture shall, without the consent of the holders of each Security then Outstanding and affected thereby, (a) extend the fixed maturity of any Securities of any series, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon, or reduce any premium payable upon the redemption thereof or (b) reduce the aforesaid percentage of Securities, the holders of which are required to consent to any such supplemental indenture.

It shall not be necessary for the consent of the Securityholders of any series affected thereby 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.

#### **Section 9.03 Effect of Supplemental Indentures.**

Upon the execution of any supplemental indenture pursuant to the provisions of this Article or of Section 10.01, this Indenture shall, with respect to such series, 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 Company and the holders of Securities of the 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 9.04 Securities Affected by Supplemental Indentures.**

Securities of any series affected by a supplemental indenture, authenticated and delivered after the execution of such supplemental indenture pursuant to the provisions of this Article or of Section 10.01, may bear a notation in form approved by the Company, provided such form meets the requirements of any securities exchange upon which such series may be listed, as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Securities of that series so modified as to conform, in the opinion of the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may be prepared by the Company, authenticated by the Trustee and delivered in exchange for the Securities of that series then Outstanding.

#### **Section 9.05 Execution of Supplemental Indentures.**

Upon the request of the Company, accompanied by its Board Resolutions authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Securityholders required to consent thereto as aforesaid, the Trustee shall join with the Company 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. The Trustee, subject to the provisions of Section 7.01, shall receive an Officer's Certificate or an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant to this Article is authorized or permitted by the terms of this Article and that all conditions precedent to the execution of the supplemental indenture have been complied with; provided, however, that such Officer's Certificate or Opinion of Counsel need not be provided in connection with the execution of a supplemental indenture that establishes the terms of a series of Securities pursuant to Section 2.01 hereof.

Promptly after the execution by the Company and the Trustee of any supplemental indenture pursuant to the provisions of this Section, the Company shall (or shall direct the Trustee to) transmit by mail, first class postage prepaid, a notice, setting forth in general terms the substance of such supplemental indenture, to the Securityholders of all series affected thereby as their names and addresses appear upon the Security Register. Any failure of the Company to mail, or cause the mailing of, such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture.

### **ARTICLE 10**

#### **SUCCESSOR ENTITY**

##### **Section 10.01 Company May Consolidate, Etc.**

Nothing contained in this Indenture shall prevent any consolidation or merger of the Company with or into any other Person (whether or not affiliated with the Company) or successive consolidations or mergers in which the Company or its successor or successors shall be a party or parties, or shall prevent any sale, conveyance, transfer or other disposition of the property of the Company or its successor or successors as an entirety, or substantially as an entirety, to any other corporation (whether or not affiliated with the Company or its successor or successors) authorized to acquire and operate the same; provided, however, (a) the Company hereby covenants and agrees that, upon any such consolidation or merger (in each case, if the Company is not the survivor of such transaction), sale, conveyance, transfer or other disposition, the due and punctual payment of the principal of (premium, if any) and interest on all of the Securities of all series in accordance with the terms of each series, according to their tenor, and the due and punctual performance and observance of all the covenants and conditions of this Indenture with respect to each series or established with respect to such series pursuant to Section 2.01 to be kept or performed by the Company shall be expressly assumed, by supplemental indenture (which shall conform to the provisions of the Trust Indenture Act, as then in effect) reasonably satisfactory in form to the Trustee executed and delivered to the Trustee by the entity formed by such consolidation, or into which the Company shall have been merged, or by the entity which shall have acquired such property and (b) in the event that the Securities of any series then Outstanding are convertible into or exchangeable for shares of common stock or other securities of the Company, such entity shall,

by such supplemental indenture, make provision so that the Securityholders of Securities of that series shall thereafter be entitled to receive upon conversion or exchange of such Securities the number of securities or property to which a holder of the number of shares of common stock or other securities of the Company deliverable upon conversion or exchange of those Securities would have been entitled had such conversion or exchange occurred immediately prior to such consolidation, merger, sale, conveyance, transfer or other disposition.

#### **Section 10.02 Successor Entity Substituted.**

(1) In case of any such consolidation, merger, sale, conveyance, transfer or other disposition and upon the assumption by the successor entity by supplemental indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the obligations set forth under Section 10.01 on all of the Securities of all series Outstanding, such successor entity shall succeed to and be substituted for the Company with the same effect as if it had been named as the Company herein, and thereupon the predecessor corporation shall be relieved of all obligations and covenants under this Indenture and the Securities.

(2) In case of any such consolidation, merger, sale, conveyance, transfer 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.

(3) Nothing contained in this Article shall require any action by the Company in the case of a consolidation or merger of any Person into the Company where the Company is the survivor of such transaction, or the acquisition by the Company, by purchase or otherwise, of all or any part of the property of any other Person (whether or not affiliated with the Company).

### **ARTICLE 11**

#### **SATISFACTION AND DISCHARGE**

##### **Section 11.01 Satisfaction and Discharge of Indenture.**

If at any time: (a) the Company shall have delivered to the Trustee for cancellation all Securities of a series theretofore authenticated and not delivered to the Trustee for cancellation (other than any Securities that shall have been destroyed, lost or stolen and that shall have been replaced or paid as provided in Section 2.07 and Securities for whose payment money or Governmental Obligations have theretofore been deposited in trust or segregated and held in trust by the Company and thereupon repaid to the Company or discharged from such trust, as provided in Section 11.05); or (b) all such Securities of a particular series not theretofore delivered to the Trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption, and the Company shall deposit or cause to be deposited with the Trustee as trust funds the entire amount in moneys or Governmental Obligations or a combination thereof, sufficient in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay at maturity or upon redemption all Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder with respect to such series by the Company then this Indenture shall thereupon cease to be of further effect with respect to such series except for the provisions of Sections 2.03, 2.05, 2.07, 4.01, 4.02, 4.03 and 7.10, that shall survive until the date of maturity or redemption date, as the case may be, and Sections 7.06 and 11.05, that shall survive to such date and thereafter, and the Trustee, on demand of the Company and at the cost and expense of the Company shall execute proper instruments acknowledging satisfaction of and discharging this Indenture with respect to such series.

**Section 11.02 Discharge of Obligations.**

If at any time all such Securities of a particular series not heretofore delivered to the Trustee for cancellation or that have not become due and payable as described in Section 11.01 shall have been paid by the Company by depositing irrevocably with the Trustee as trust funds moneys or an amount of Governmental Obligations sufficient to pay at maturity or upon redemption all such Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder by the Company with respect to such series, then after the date such moneys or Governmental Obligations, as the case may be, are deposited with the Trustee the obligations of the Company under this Indenture with respect to such series shall cease to be of further effect except for the provisions of Sections 2.03, 2.05, 2.07, 4.01, 4.02, 4.03, 7.06, 7.10 and 11.05 hereof that shall survive until such Securities shall mature and be paid.

Thereafter, Sections 7.06 and 11.05 shall survive.

**Section 11.03 Deposited Moneys to be Held in Trust.**

All moneys or Governmental Obligations deposited with the Trustee pursuant to Sections 11.01 or 11.02 shall be held in trust and shall be available for payment as due, either directly or through any paying agent (including the Company acting as its own paying agent), to the holders of the particular series of Securities for the payment or redemption of which such moneys or Governmental Obligations have been deposited with the Trustee.

**Section 11.04 Payment of Moneys Held by Paying Agents.**

In connection with the satisfaction and discharge of this Indenture all moneys or Governmental Obligations then held by any paying agent under the provisions of this Indenture shall, upon demand of the Company, be paid to the Trustee and thereupon such paying agent shall be released from all further liability with respect to such moneys or Governmental Obligations.

**Section 11.05 Repayment to Company.**

Any moneys or Governmental Obligations deposited with any paying agent or the Trustee, or then held by the Company, in trust for payment of principal of or premium, if any, or interest on the Securities of a particular series that are not applied but remain unclaimed by the holders of such Securities for at least two years after the date upon which the principal of (and premium, if any) or interest on such Securities shall have respectively become due and payable, or such other shorter period set forth in applicable escheat or abandoned or unclaimed property law, shall be repaid to the Company on May 31 of each year or upon the Company's request or (if then held by the Company) shall be discharged from such trust; and thereupon the paying agent and the Trustee shall be released from all further liability with respect to such moneys or Governmental Obligations, and the holder of any of the Securities entitled to receive such payment shall thereafter, as a general creditor, look only to the Company for the payment thereof.

**ARTICLE 12**

**IMMUNITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS AND DIRECTORS**

**Section 12.01 No Recourse.**

No recourse under or upon any obligation, covenant or agreement of this Indenture, or of any Security, or for any claim based thereon or otherwise in respect thereof, shall be had against any incorporator, stockholder, officer or director, past, present or future as such, of the Company or of any predecessor or successor corporation, either directly or through the Company or any such predecessor or successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly understood that this Indenture and the obligations issued hereunder are solely corporate obligations, and that no such personal liability whatever shall attach to, or is or shall be incurred by, the incorporators, stockholders, officers or directors as such, of the Company or of any predecessor or successor corporation, or any of them, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom; and that any and all such

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

## ARTICLE 13

### MISCELLANEOUS PROVISIONS

#### **Section 13.01 Effect on Successors and Assigns.**

All the covenants, stipulations, promises and agreements in this Indenture made by or on behalf of the Company shall bind its successors and assigns, whether so expressed or not.

#### **Section 13.02 Actions by Successor.**

Any act or proceeding by any provision of this Indenture authorized or required to be done or performed by any board, committee or officer of the Company shall and may be done and performed with like force and effect by the corresponding board, committee or officer of any corporation that shall at the time be the lawful successor of the Company.

#### **Section 13.03 Surrender of Company Powers.**

The Company by instrument in writing executed by authority of its Board of Directors and delivered to the Trustee may surrender any of the powers reserved to the Company, and thereupon such power so surrendered shall terminate both as to the Company and as to any successor corporation.

#### **Section 13.04 Notices.**

Except as otherwise expressly provided herein, any notice, request or demand that by any provision of this Indenture is required or permitted to be given, made or served by the Trustee or by the holders of Securities or by any other Person pursuant to this Indenture to or on the Company may be given or served by being deposited in first class mail, postage prepaid, addressed (until another address is filed in writing by the Company with the Trustee), as follows: . Any notice, election, request or demand by the Company or any Securityholder or by any other Person pursuant to this Indenture to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or made in writing at the Corporate Trust Office of the Trustee.

#### **Section 13.05 Governing Law.**

This Indenture and each Security shall be deemed to be a contract made under the internal laws of the State of New York, and for all purposes shall be construed in accordance with the laws of said State, except to the extent that the Trust Indenture Act is applicable.

#### **Section 13.06 Treatment of Securities as Debt.**

It is intended that the Securities will be treated as indebtedness and not as equity for federal income tax purposes. The provisions of this Indenture shall be interpreted to further this intention.

#### **Section 13.07 Certificates and Opinions as to Conditions Precedent.**

(1) Upon any application or demand by the Company to the Trustee to take any action under any of the provisions of this Indenture, the Company shall furnish to the Trustee an Officer's Certificate stating that all conditions precedent provided for in this Indenture (other than the certificate to be delivered pursuant to

Section 13.12) relating to the proposed action have been complied with and, if requested, 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.

(2) Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant in this Indenture shall include (i) a statement that the Person making such certificate or opinion has read such covenant or condition; (ii) 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; (iii) a statement that, in the opinion of such Person, he has made such examination or investigation as is reasonably necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and (iv) a statement as to whether or not, in the opinion of such Person, such condition or covenant has been complied with.

#### **Section 13.08 Payments on Business Days.**

Except as provided pursuant to Section 2.01 pursuant to a Board Resolution, and set forth in an Officer's Certificate, or established in one or more indentures supplemental to this Indenture, in any case where the date of maturity of interest or principal of any Security or the date of redemption of any Security shall not be a Business Day, then payment of interest or principal (and premium, if any) may be made on the next succeeding Business Day with the same force and effect as if made on the nominal date of maturity or redemption, and no interest shall accrue for the period after such nominal date.

#### **Section 13.09 Conflict with Trust Indenture Act.**

If and to the extent that any provision of this Indenture limits, qualifies or conflicts with the duties imposed by Sections 310 to 317, inclusive, of the Trust Indenture Act, such imposed duties shall control.

#### **Section 13.10 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 13.11 Separability.**

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

#### **Section 13.12 Compliance Certificates.**

The Company shall deliver to the Trustee, within 120 days after the end of each fiscal year during which any Securities of any series were outstanding, an officer's certificate stating whether or not the signers know of any Event of Default that occurred during such fiscal year. Such certificate shall contain a certification from the principal executive officer, principal financial officer or principal accounting officer of the Company that a review has been conducted of the activities of the Company and the Company's performance under this Indenture and that the Company has complied with all conditions and covenants under this Indenture. For purposes of this Section 13.12, such compliance shall be determined without regard to any period of grace or requirement of notice provided under this Indenture. If the officer of the Company signing such certificate has knowledge of such an Event of Default, the certificate shall describe any such Event of Default and its status.

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

**IKENA ONCOLOGY, INC.**

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

**[TRUSTEE]**, as Trustee

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



**CROSS-REFERENCE TABLE(2)**

<u>Section of Trust Indenture Act of 1939, as Amended</u>	<u>Section of Indenture</u>
310(a)	7.09
310(b)	7.08 7.10
310(c)	Inapplicable
311(a)	7.13
311(b)	7.13
311(c)	Inapplicable
312(a)	5.01 5.02(1)
312(b)	5.02(3)
312(c)	5.02(3)
313(a)	5.04(1)
313(b)	5.04(2)
313(c)	5.04(1) 5.04(2)
313(d)	5.04(3)
314(a)	5.03 13.12
314(b)	Inapplicable
314(c)	13.07(1)
314(d)	Inapplicable
314(e)	13.07(2)
314(f)	Inapplicable
315(a)	7.01(1) 7.01(2)
315(b)	7.14
315(c)	7.01
315(d)	7.01(2)
315(e)	6.07
316(a)	6.06 8.04
316(b)	6.04
316(c)	8.01
317(a)	6.02
317(b)	4.03
318(a)	13.09

<sup>2</sup> This Cross-Reference Table does not constitute part of the Indenture and shall not have any bearing on the interpretation of any of its terms or provisions.

**IKENA ONCOLOGY, INC.**

**Issuer**

**AND**

**[TRUSTEE],**

**Trustee**

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**INDENTURE**

**Dated as of [•], 202[•]**

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**Subordinated Debt Securities**

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## INDENTURE

INDENTURE, dated as of [•], 202 , among IKENA ONCOLOGY, INC., a Delaware corporation (the “Company”), and [TRUSTEE], as trustee (the “Trustee”):

WHEREAS, for its lawful corporate purposes, the Company has duly authorized the execution and delivery of this Indenture to provide for the issuance of subordinated debt securities (hereinafter referred to as the “Securities”), in an unlimited aggregate principal amount to be issued from time to time in one or more series as in this Indenture provided, as registered Securities without coupons, to be authenticated by the certificate of the Trustee;

WHEREAS, to provide the terms and conditions upon which the Securities are to be authenticated, issued and delivered, the Company has duly authorized the execution of this Indenture; and

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

NOW, THEREFORE, in consideration of the premises and the purchase of the Securities by the holders thereof, it is mutually covenanted and agreed as follows for the equal and ratable benefit of the holders of Securities:

### ARTICLE 1

#### DEFINITIONS

##### Section 1.01 Definitions of Terms.

The terms defined in this Section (except as in this Indenture or any indenture supplemental hereto otherwise expressly provided or unless the context otherwise requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section and shall include the plural as well as the singular. All other terms used in this Indenture that are defined in the Trust Indenture Act of 1939, as amended, or that are by reference in such Act defined in the Securities Act of 1933, as amended (except as herein or any indenture supplemental hereto otherwise expressly provided or unless the context otherwise 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 the execution of this instrument.

“*Authenticating Agent*” means an authenticating agent with respect to all or any of the series of Securities appointed by the Trustee pursuant to Section 2.10.

“*Bankruptcy Law*” means Title 11, U.S. Code, or any similar federal or state law for the relief of debtors.

“*Board of Directors*” means the Board of Directors (or the functional equivalent thereof) of the Company or any duly authorized committee of such Board.

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

“*Business Day*” means, with respect to any series of Securities, any day other than a day on which federal or state banking institutions in the Borough of Manhattan, the City of New York, or in the city of the Corporate Trust Office of the Trustee, are authorized or obligated by law, executive order or regulation to close.

“*Certificate*” means a certificate signed by any Officer. The Certificate need not comply with the provisions of Section 13.07.

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

“**Company**” means Ikena Oncology, Inc., a corporation duly organized and existing under the laws of the State of Delaware, and, subject to the provisions of Article Ten, shall also include its successors and assigns.

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

“**Custodian**” means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

“**Defaulted Interest**” has the meaning set forth in Section 2.03.

“**Depository**” means, with respect to Securities of any series for which the Company shall determine that such Securities will be issued as a Global Security, The Depository Trust Company, another clearing agency, or any successor registered as a clearing agency under the Exchange Act, or other applicable statute or regulation, which, in each case, shall be designated by the Company pursuant to either Section 2.01 or 2.11.

“**Event of Default**” means, with respect to Securities of a particular series, any event specified in Section 6.01, continued for the period of time, if any, therein designated.

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

“**Global Security**” means a Security issued to evidence all or a part of any series of Securities which is executed by the Company and authenticated and delivered by the Trustee to the Depository or pursuant to the Depository’s instruction, all in accordance with the Indenture, which shall be registered in the name of the Depository or its nominee.

“**Governmental Obligations**” means securities that are (a) direct obligations of the United States of America for the payment of which its full faith and credit is pledged or (b) obligations of a Person controlled or supervised by and acting as an agency or instrumentality of the United States of America, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America that, in either case, are not callable or redeemable at the option of the issuer thereof at any time prior to the stated maturity of the Securities, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such Governmental Obligation or a specific payment of principal of or interest on any such Governmental Obligation held by such custodian for the account of the holder of such depository receipt; provided, however, 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 Governmental Obligation or the specific payment of principal of or interest on the Governmental Obligation evidenced by such depository receipt.

“**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.

“**Indenture**” means this instrument as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into in accordance with the terms hereof and shall include the terms of particular series of Securities established as contemplated by Section 2.01.

“**Interest Payment Date**”, when used with respect to any installment of interest on a Security of a particular series, means the date specified in such Security or in a Board Resolution or in an indenture supplemental hereto with respect to such series as the fixed date on which an installment of interest with respect to Securities of that series is due and payable.

“**Officer**” means, with respect to the Company, the chairman of the Board of Directors, a chief executive officer, a president, a chief financial officer, a chief operating officer, any executive vice president, any senior vice president, any vice president, the treasurer or any assistant treasurer, the controller or any assistant controller or the secretary or any assistant secretary.

“**Officer’s Certificate**” means a certificate signed by any Officer. Each such certificate shall include the statements provided for in Section 13.07, if and to the extent required by the provisions thereof.

“**Opinion of Counsel**” means an opinion in writing subject to customary exceptions of legal counsel, who may be an employee of or counsel for the Company, that is delivered to the Trustee in accordance with the terms hereof. Each such opinion shall include the statements provided for in Section 13.07, if and to the extent required by the provisions thereof.

“**Outstanding**”, when used with reference to Securities of any series, means, subject to the provisions of Section 8.04, as of any particular time, all Securities of that series theretofore authenticated and delivered by the Trustee under this Indenture, except (a) Securities theretofore canceled by the Trustee or any paying agent, or delivered to the Trustee or any paying agent for cancellation or that have previously been canceled; (b) Securities or portions thereof for the payment or redemption of which moneys or Governmental Obligations in the necessary amount shall have been deposited in trust with the Trustee or with any paying agent (other than the Company) or shall have been set aside and segregated in trust by the Company (if the Company shall act as its own paying agent); provided, however, that if such Securities or portions of such Securities are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as provided in Article Three, or provision satisfactory to the Trustee shall have been made for giving such notice; and (c) Securities in lieu of or in substitution for which other Securities shall have been authenticated and delivered pursuant to the terms of Section 2.07.

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

“**Predecessor Security**” of any particular Security means every previous Security evidencing all or a portion of the same debt as that evidenced by such particular Security; and, for the purposes of this definition, any Security authenticated and delivered under Section 2.07 in lieu of a lost, destroyed or stolen Security shall be deemed to evidence the same debt as the lost, destroyed or stolen Security.

“**Responsible Officer**” when used with respect to the Trustee means any officer of the Trustee assigned by the Trustee to administer its corporate trust matters with respect to this Indenture (which, for the avoidance of doubt, includes without limitation any supplemental indenture hereto).

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

“**Securityholder**”, “**holder of Securities**”, “**registered holder**”, or other similar term, means the Person or Persons in whose name or names a particular Security is registered on the Security Register kept for that purpose in accordance with the terms of this Indenture.

“**Security Register**” and “**Security Registrar**” shall have the meanings as set forth in Section 2.05.

“**Subsidiary**” means, with respect to any Person:

(1) any corporation or company a majority of whose capital stock with voting power, under ordinary circumstances, to elect directors is, at the date of determination, directly or indirectly, owned by such Person (a “**subsidiary**”), by one or more subsidiaries of such Person or by such Person and one or more subsidiaries of such Person;

(2) a partnership in which such Person or a subsidiary of such Person is, at the date of determination, a general partner of such partnership; or

(3) any partnership, limited liability company or other Person in which such Person, a subsidiary of such Person or such Person and one or more subsidiaries of such Person, directly or indirectly, at the date of determination, have (x) at least a majority ownership interest or (y) the power to elect or appoint or direct the election or appointment of the managing partner or member of such Person or, if applicable, a majority of the directors or other governing body of such Person.

“*Trustee*” means \_\_\_\_\_, and, subject to the provisions of Article Seven, shall also include its successors and assigns, and, if at any time there is more than one Person acting in such capacity hereunder, “*Trustee*” shall mean each such Person. The term “*Trustee*” as used with respect to a particular series of the Securities shall mean the trustee with respect to that series.

“*Trust Indenture Act*” means the Trust Indenture Act of 1939, as amended.

## ARTICLE 2

### ISSUE, DESCRIPTION, TERMS, EXECUTION, REGISTRATION AND EXCHANGE OF SECURITIES

#### Section 2.01 Designation and Terms of Securities.

(1) The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more series up to the aggregate principal amount of Securities of that series from time to time authorized by or pursuant to a Board Resolution or pursuant to one or more indentures supplemental hereto. Prior to the initial issuance of Securities of any series, there shall be established in or pursuant to a Board Resolution, and set forth in an Officer’s Certificate, or established in one or more indentures supplemental hereto:

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

(b) any limit upon the aggregate principal amount of the Securities of that series which may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of that series);

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

(d) if the price (expressed as a percentage of the aggregate principal amount thereof) at which such Securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such Securities that is convertible into another security or the method by which any such portion shall be determined;

(e) the rate or rates at which the Securities of the series shall bear interest or the manner of calculation of such rate or rates, if any;

(f) the date or dates from which such interest shall accrue, the Interest Payment Dates on which such interest will be payable or the manner of determination of such Interest Payment Dates, the place(s) of payment, and the record date for the determination of holders to whom interest is payable on any such Interest Payment Dates or the manner of determination of such record dates;

(g) the right, if any, to extend the interest payment periods and the duration of such extension;



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

(i) the obligation, if any, of the Company to redeem or purchase Securities of the series pursuant to any sinking fund, mandatory redemption, or analogous provisions (including payments made in cash in satisfaction of future sinking fund obligations) or at the option of a holder thereof and the period or periods within which, the price or prices at which, and the terms and conditions upon which, Securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

(j) the form of the Securities of the series including the form of the Certificate of Authentication for such series;

(k) if other than denominations of one thousand U.S. dollars (\$1,000) or any integral multiple thereof, the denominations in which the Securities of the series shall be issuable;

(l) any and all other terms (including terms, to the extent applicable, relating to any auction or remarketing of the Securities of that series and any security for the obligations of the Company with respect to such Securities) with respect to such series (which terms shall not be inconsistent with the terms of this Indenture, as amended by any supplemental indenture) including any terms which may be required by or advisable under United States laws or regulations or advisable in connection with the marketing of Securities of that series;

(m) whether the Securities of the series shall be issued in whole or in part in the form of a Global Security or Securities; the terms and conditions, if any, upon which such Global Security or Securities may be exchanged in whole or in part for other individual Securities; and the Depositary for such Global Security or Securities;

(n) whether the Securities will be convertible into or exchangeable for shares of common stock, preferred stock or other securities of the Company or any other Person and, if so, the terms and conditions upon which such Securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at the Company's option or the holders' option) conversion or exchange features, and the applicable conversion or exchange period;

(o) if other than the full 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 6.01;

(p) any additional or alternative events of default;

(q) additional or alternative covenants (which may include, among other restrictions, restrictions on the Company's ability or the ability of the Company's Subsidiaries to: incur additional indebtedness; issue additional securities; create liens; pay dividends or make distributions in respect of the capital stock of the Company or the Company's Subsidiaries; redeem capital stock; place restrictions on the Company's Subsidiaries' ability to pay dividends, make distributions or transfer assets; make investments or other restricted payments; sell or otherwise dispose of assets; enter into sale-leaseback transactions; engage in transactions with stockholders or affiliates; issue or sell stock of the Company's Subsidiaries; or effect a consolidation or merger) or financial covenants (which may include, among other financial covenants, financial covenants that require the Company and its Subsidiaries to maintain specified interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios) provided for with respect to the Securities of the series;

(r) the currency or currencies, including composite currencies, in which payment of the principal of (and premium, if any) and interest, if any, on such Securities shall be payable (if other than the currency of the United States of America), which unless otherwise specified shall be the currency of the United States of America as at the time of payment is legal tender for payment of public or private debts;

(s) if the principal of (and premium, if any) or interest, if any, on such Securities is to be payable, at the election of the Company or any Holder thereof, in a coin or currency other than that in which such Securities are stated to be payable, then the period or periods within which, and the terms and conditions upon which, such election may be made;

(t) whether interest will be payable in cash or additional Securities at the Company's or the Securityholders' option and the terms and conditions upon which the election may be made;

(u) the terms and conditions, if any, upon which the Company shall pay amounts in addition to the stated interest, premium, if any and principal amounts of the Securities of the series to any Securityholder that is not a "United States person" for federal tax purposes;

(v) additional or alternative provisions, if any, related to defeasance and discharge of the offered Securities;

(w) the applicability of any guarantees;

(x) any restrictions on transfer, sale or assignment of the Securities of the series;

(y) any other terms of the series; and

(z) the subordination terms of the Securities of the series.

All Securities of any one series shall be substantially identical except as may otherwise be provided in or pursuant to any such Board Resolution or in any indentures supplemental hereto.

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

Securities of any particular series may be issued at various times, with different dates on which the principal or any installment of principal is payable, with different rates of interest, if any, or different methods by which rates of interest may be determined, with different dates on which such interest may be payable and with different redemption dates.

#### **Section 2.02 Form of Securities and Trustee's Certificate.**

The Securities of any series and the Trustee's certificate of authentication to be borne by such Securities shall be substantially of the tenor and purport as set forth in one or more indentures supplemental hereto or as provided in a Board Resolution, and set forth in an Officer's Certificate, and they may have such letters, numbers or other marks of identification or designation and such legends or endorsements printed, lithographed or engraved thereon as the Company may deem appropriate and as are not inconsistent with the provisions of this Indenture, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any securities exchange on which Securities of that series may be listed, or to conform to usage.

#### **Section 2.03 Denominations: Provisions for Payment.**

The Securities shall be issuable as registered Securities and in the denominations of one thousand U.S. dollars (\$1,000) or any integral multiple thereof, subject to Section 2.01(1)(j). The Securities of a particular series shall bear interest payable on the dates and at the rate specified with respect to that series. Subject to Section

2.01(1)(p), the principal of and the interest on the Securities of any series, as well as any premium thereon in case of redemption thereof prior to maturity, shall be payable in the coin or currency of the United States of America that at the time is legal tender for public and private debt, at the office or agency of the Company maintained for that purpose. Each Security shall be dated the date of its authentication. Interest on the Securities shall be computed on the basis of a 360-day year composed of twelve 30-day months.

The interest installment on any Security that is payable, and is punctually paid or duly provided for, on any Interest Payment Date for Securities of that series shall be paid to the Person in whose name said Security (or one or more Predecessor Securities) is registered at the close of business on the regular record date for such interest installment. In the event that any Security of a particular series or portion thereof is called for redemption and the redemption date is subsequent to a regular record date with respect to any Interest Payment Date and prior to such Interest Payment Date, interest on such Security will be paid upon presentation and surrender of such Security as provided in Section 3.03.

Any interest on any Security that is payable, but is not punctually paid or duly provided for, on any Interest Payment Date for Securities of the same series (herein called "Defaulted Interest") shall forthwith cease to be payable to the registered holder on the relevant regular record date by virtue of having been such holder; and such Defaulted Interest shall be paid by the Company, at its election, as provided in clause (1) or clause (2) below:

(1) The Company may make payment of any Defaulted Interest on Securities to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered at the close of business on a special record date for the payment of such Defaulted Interest, which shall be fixed in the following manner: the Company shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each such Security and the date of the proposed payment, and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as in this clause provided. Thereupon the Trustee shall fix a special record date for the payment of such Defaulted Interest which shall not be more than 15 nor less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such special record date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the special record date therefor to be mailed, first class postage prepaid, to each Securityholder at his or her address as it appears in the Security Register (as hereinafter defined), not less than 10 days prior to such special record date. Notice of the proposed payment of such Defaulted Interest and the special record date therefor having been mailed as aforesaid, such Defaulted Interest shall be paid to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered on such special record date.

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

Unless otherwise set forth in a Board Resolution or one or more indentures supplemental hereto establishing the terms of any series of Securities pursuant to Section 2.01 hereof, the term "regular record date" as used in this Section with respect to a series of Securities and any Interest Payment Date for such series shall mean either the fifteenth day of the month immediately preceding the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the first day of a month, or the first day of the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the fifteenth day of a month, whether or not such date is a Business Day.

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

#### **Section 2.04 Execution and Authentications.**

The Securities shall be signed on behalf of the Company by one of its Officers. Signatures may be in the form of a manual or facsimile signature.

The Company may use the facsimile signature of any Person who shall have been an Officer, notwithstanding the fact that at the time the Securities shall be authenticated and delivered or disposed of such Person shall have ceased to be such an officer of the Company. The Securities may contain such notations, legends or endorsements required by law, stock exchange rule or usage. Each Security shall be dated the date of its authentication by the Trustee.

A Security shall not be valid until authenticated manually by an authorized signatory of the Trustee, or by an Authenticating Agent. Such signature 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. At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Securities of any series executed by the Company to the Trustee for authentication, together with a written order of the Company for the authentication and delivery of such Securities, signed by an Officer, and the Trustee in accordance with such written order shall authenticate and deliver such Securities.

In authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall be entitled to receive, if requested, and (subject to Section 7.01) shall be fully protected in relying upon, an Opinion of Counsel stating that the form and terms thereof have been established in conformity with the provisions of this Indenture.

The Trustee shall not be required to authenticate such Securities if the issue of such Securities pursuant to this Indenture will affect the Trustee's own rights, duties or immunities under the Securities and this Indenture or otherwise in a manner that is not reasonably acceptable to the Trustee.

#### **Section 2.05 Registration of Transfer and Exchange.**

(1) Securities of any series may be exchanged upon presentation thereof at the office or agency of the Company designated for such purpose, for other Securities of such series of authorized denominations, and for a like aggregate principal amount, upon payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, all as provided in this Section. In respect of any Securities so surrendered for exchange, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in exchange therefor the Security or Securities of the same series that the Securityholder making the exchange shall be entitled to receive, bearing numbers not contemporaneously outstanding.

(2) The Company shall keep, or cause to be kept, at its office or agency designated for such purpose a register or registers (herein referred to as the "Security Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall register the Securities and the transfers of Securities as in this Article provided and which at all reasonable times shall be open for inspection by the Trustee. The registrar for the purpose of registering Securities and transfer of Securities as herein provided shall be appointed as authorized by Board Resolution (the "Security Registrar").

Upon surrender for transfer of any Security at the office or agency of the Company designated for such purpose, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in the name of the transferee or transferees a new Security or Securities of the same series as the Security presented for a like aggregate principal amount.

All Securities presented or surrendered for exchange or registration of transfer, as provided in this Section, shall be accompanied (if so required by the Company or the Security Registrar) by a written instrument or instruments of transfer, in form satisfactory to the Company or the Security Registrar, duly executed by the registered holder or by such holder's duly authorized attorney in writing.

(3) Except as provided pursuant to Section 2.01 pursuant to a Board Resolution, and set forth in an Officer's Certificate, or established in one or more indentures supplemental to this Indenture, no service charge shall be made for any exchange or registration of transfer of Securities, or issue of new Securities in case of partial redemption of any series, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, other than exchanges pursuant to Section 2.06, Section 3.03(2) and Section 9.04 not involving any transfer.

(4) The Company shall not be required (i) to issue, exchange or register the transfer of any Securities during a period beginning at the opening of business 15 days before the day of the mailing of a notice of redemption of less than all the Outstanding Securities of the same series and ending at the close of business on the day of such mailing, nor (ii) to register the transfer of or exchange any Securities of any series or portions thereof called for redemption, other than the unredeemed portion of any such Securities being redeemed in part. The provisions of this Section 2.05 are, with respect to any Global Security, subject to Section 2.11 hereof.

The Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any Security (including any transfers between or among depository participants or beneficial owners of interests in any Global Security) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

#### **Section 2.06 Temporary Securities.**

Pending the preparation of definitive Securities of any series, the Company may execute, and the Trustee shall authenticate and deliver, temporary Securities (printed, lithographed or typewritten) of any authorized denomination. Such temporary Securities shall be substantially in the form of the definitive Securities in lieu of which they are issued, but with such omissions, insertions and variations as may be appropriate for temporary Securities, all as may be determined by the Company. Every temporary Security of any series shall be executed by the Company and be authenticated by the Trustee upon the same conditions and in substantially the same manner, and with like effect, as the definitive Securities of such series. Without unnecessary delay the Company will execute and will furnish definitive Securities of such series and thereupon any or all temporary Securities of such series may be surrendered in exchange therefor (without charge to the holders), at the office or agency of the Company designated for the purpose, and the Trustee shall authenticate and such office or agency shall deliver in exchange for such temporary Securities an equal aggregate principal amount of definitive Securities of such series, unless the Company advises the Trustee to the effect that definitive Securities need not be executed and furnished until further notice from the Company. Until so exchanged, the temporary Securities of such series shall be entitled to the same benefits under this Indenture as definitive Securities of such series authenticated and delivered hereunder.

#### **Section 2.07 Mutilated, Destroyed, Lost or Stolen Securities.**

In case any temporary or definitive Security shall become mutilated or be destroyed, lost or stolen, the Company (subject to the next succeeding sentence) shall execute, and upon the Company's request the Trustee (subject as aforesaid) shall authenticate and deliver, a new Security of the same series, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated Security, or in lieu of and in substitution for the Security so destroyed, lost or stolen. In every case the applicant for a substituted Security shall furnish to the Company and the Trustee such security or indemnity as may be required by them to save each of them harmless, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Company and the Trustee evidence to their satisfaction of the destruction, loss or theft of the applicant's Security and of the ownership thereof. The Trustee may authenticate any such substituted Security and deliver the same upon the written request or authorization of any officer of the Company. Upon the issuance of any substituted Security, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith.

In case any Security that has matured or is about to mature shall become mutilated or be destroyed, lost or stolen, the Company 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 Security) if the applicant for such payment shall furnish to the Company and the Trustee such security or indemnity as they may require to save them harmless, and, in case of destruction, loss or theft, evidence to the satisfaction of the Company and the Trustee of the destruction, loss or theft of such Security and of the ownership thereof.

Every replacement Security issued pursuant to the provisions of this Section shall constitute an additional contractual obligation of the Company whether or not the mutilated, destroyed, lost or stolen Security shall be found at any time, or be enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of the same series duly issued hereunder. All Securities shall be held and owned upon the express condition that the foregoing provisions are exclusive with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities, and shall preclude (to the extent lawful) any and all other rights or remedies, notwithstanding any law or statute existing or hereafter enacted to the contrary with respect to the replacement or payment of negotiable instruments or other securities without their surrender.

#### **Section 2.08 Cancellation.**

All Securities surrendered for the purpose of payment, redemption, exchange or registration of transfer shall, if surrendered to the Company or any paying agent, be delivered to the Trustee for cancellation, or, if surrendered to the Trustee, shall be cancelled by it, and no Securities shall be issued in lieu thereof except as expressly required or permitted by any of the provisions of this Indenture. On request of the Company at the time of such surrender, the Trustee shall deliver to the Company canceled Securities held by the Trustee. In the absence of such request the Trustee may dispose of canceled Securities in accordance with its standard procedures and deliver a certificate of disposition to the Company. If the Company shall otherwise acquire any of the Securities, however, 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 2.09 Benefits of Indenture.**

Nothing in this Indenture or in the Securities, express or implied, shall give or be construed to give to any Person, other than the parties hereto and the holders of the Securities (and, with respect to the provisions of Article Fourteen, the holders of any indebtedness of the Company to which the Securities of any series are subordinated) any legal or equitable right, remedy or claim under or in respect of this Indenture, or under any covenant, condition or provision herein contained; all such covenants, conditions and provisions being for the sole benefit of the parties hereto and of the holders of the Securities (and, with respect to the provisions of Article Fourteen, the holders of any indebtedness of the Company to which the Securities of any series are subordinated).

#### **Section 2.10 Authenticating Agent.**

So long as any of the Securities of any series remain Outstanding there may be an Authenticating Agent for any or all such series of Securities which the Trustee shall have the right to appoint. Said Authenticating Agent shall be authorized to act on behalf of the Trustee to authenticate Securities of such series issued upon exchange, transfer or partial redemption thereof, and Securities so authenticated shall be entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. All references in this Indenture to the authentication of Securities by the Trustee shall be deemed to include authentication by an Authenticating Agent for such series. Each Authenticating Agent shall be acceptable to the Company and shall be a corporation that has a combined capital and surplus, as most recently reported or determined by it, sufficient under the laws of any jurisdiction under which it is organized or in which it is doing business to conduct a trust business, and that is otherwise authorized under such laws to conduct such business and is subject to supervision or examination by federal or state authorities. If at any time any Authenticating Agent shall cease to be eligible in accordance with these provisions, it shall resign immediately.

Any Authenticating Agent may at any time resign by giving written notice of resignation to the Trustee and to the Company. The Trustee may at any time (and upon request by the Company shall) terminate the agency of any Authenticating Agent by giving written notice of termination to such Authenticating Agent and to the Company. Upon resignation, termination or cessation of eligibility of any Authenticating Agent, the Trustee may appoint an eligible successor Authenticating Agent acceptable to the Company. Any successor Authenticating Agent, upon acceptance of its appointment hereunder, shall become vested with all the rights, powers and duties of its predecessor hereunder as if originally named as an Authenticating Agent pursuant hereto.

## **Section 2.11 Global Securities.**

(1) If the Company shall establish pursuant to Section 2.01 that the Securities of a particular series are to be issued as a Global Security, then the Company shall execute and the Trustee shall, in accordance with Section 2.04, authenticate and deliver, a Global Security that (i) shall represent, and shall be denominated in an amount equal to the aggregate principal amount of, all of the Outstanding Securities of such series, (ii) shall be registered in the name of the Depository or its nominee, (iii) shall be delivered by the Trustee to the Depository or pursuant to the Depository's instruction and (iv) shall bear a legend substantially to the following effect: "Except as otherwise provided in Section 2.11 of the Indenture, this Security may be transferred, in whole but not in part, only to another nominee of the Depository or to a successor Depository or to a nominee of such successor Depository."

(2) Notwithstanding the provisions of Section 2.05, the Global Security of a series may be transferred, in whole but not in part and in the manner provided in Section 2.05, only to another nominee of the Depository for such series, or to a successor Depository for such series selected or approved by the Company or to a nominee of such successor Depository.

(3) If at any time the Depository for a series of the Securities notifies the Company that it is unwilling or unable to continue as Depository for such series or if at any time the Depository for such series shall no longer be registered or in good standing under the Exchange Act, or other applicable statute or regulation, and a successor Depository for such series is not appointed by the Company within 90 days after the Company receives such notice or becomes aware of such condition, as the case may be, or if an Event of Default has occurred and is continuing and the Company has received a request from the Depository or from the Trustee, this Section 2.11 shall no longer be applicable to the Securities of such series and the Company will execute, and subject to Section 2.04, the Trustee will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal amount of the Global Security of such series in exchange for such Global Security. In addition, the Company may at any time determine that the Securities of any series shall no longer be represented by a Global Security and that the provisions of this Section 2.11 shall no longer apply to the Securities of such series. In such event the Company will execute and, subject to Section 2.04, the Trustee, upon receipt of an Officer's Certificate evidencing such determination by the Company, will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal amount of the Global Security of such series in exchange for such Global Security. Upon the exchange of the Global Security for such Securities in definitive registered form without coupons, in authorized denominations, the Global Security shall be canceled by the Trustee. Such Securities in definitive registered form issued in exchange for the Global Security pursuant to this Section 2.11(3) shall be registered in such names and in such authorized denominations as the Depository, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. The Trustee shall deliver such Securities to the Depository for delivery to the Persons in whose names such Securities are so registered.

## **ARTICLE 3**

### **REDEMPTION OF SECURITIES AND SINKING FUND PROVISIONS**

#### **Section 3.01 Redemption.**

The Company may redeem the Securities of any series issued hereunder on and after the dates and in accordance with the terms established for such series pursuant to Section 2.01 hereof.

### **Section 3.02 Notice of Redemption.**

(1) In case the Company shall desire to exercise such right to redeem all or, as the case may be, a portion of the Securities of any series in accordance with any right the Company reserved for itself to do so pursuant to Section 2.01 hereof, the Company shall, or shall cause the Trustee to, give notice of such redemption to holders of the Securities of such series to be redeemed by mailing, first class postage prepaid, a notice of such redemption not less than 30 days and not more than 90 days before the date fixed for redemption of that series to such holders at their last addresses as they shall appear upon the Security Register, unless a shorter period is specified in the Securities to be redeemed. Any notice that is mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the registered holder receives the notice. In any case, failure duly to give such notice to the holder of any Security of any series designated for redemption in whole or in part, or any defect in the notice, shall not affect the validity of the proceedings for the redemption of any other Securities of such series or any other series. In the case of any redemption of Securities prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture, the Company shall furnish the Trustee with an Officer's Certificate evidencing compliance with any such restriction.

Each such notice of redemption shall specify the date fixed for redemption and the redemption price at which Securities of that series are to be redeemed, and shall state that payment of the redemption price of such Securities to be redeemed will be made at the office or agency of the Company, upon presentation and surrender of such Securities, that interest accrued to the date fixed for redemption will be paid as specified in said notice, that from and after said date interest will cease to accrue and that the redemption is from a sinking fund, if such is the case. If less than all the Securities of a series are to be redeemed, the notice to the holders of Securities of that series to be redeemed in part shall specify the particular Securities to be so redeemed.

In case any Security is to be redeemed in part only, the notice that relates to such Security shall state the portion of the principal amount thereof to be redeemed, and shall state that on and after the redemption date, 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.

(2) If less than all the Securities of a series are to be redeemed, the Company shall give the Trustee at least 45 days' notice (unless a shorter notice shall be satisfactory to the Trustee) in advance of the date fixed for redemption as to the aggregate principal amount of Securities of the series to be redeemed, and thereupon the Trustee shall select, by lot or in such other manner as it shall deem appropriate and fair in its discretion and that may provide for the selection of a portion or portions (equal to one thousand U.S. dollars (\$1,000) or any integral multiple thereof) of the principal amount of such Securities of a denomination larger than \$1,000, the Securities to be redeemed and shall thereafter promptly notify the Company in writing of the numbers of the Securities to be redeemed, in whole or in part. The Company may, if and whenever it shall so elect, by delivery of instructions signed on its behalf by an Officer, instruct the Trustee or any paying agent to call all or any part of the Securities of a particular series for redemption and to give notice of redemption in the manner set forth in this Section, such notice to be in the name of the Company or its own name as the Trustee or such paying agent may deem advisable. In any case in which notice of redemption is to be given by the Trustee or any such paying agent, the Company shall deliver or cause to be delivered to, or permit to remain with, the Trustee or such paying agent, as the case may be, such Security Register, transfer books or other records, or suitable copies or extracts therefrom, sufficient to enable the Trustee or such paying agent to give any notice by mail that may be required under the provisions of this Section.

### **Section 3.03 Payment Upon Redemption.**

(1) If the giving of notice of redemption shall have been completed as above provided, the Securities or portions of Securities of the series to be redeemed 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 interest on such Securities or portions of Securities shall cease to accrue on and after the date fixed for redemption, unless the Company shall default in the payment of such redemption price and accrued interest with respect to any such Security or portion thereof. On presentation and surrender of such Securities on or after the date fixed for redemption at the place of payment specified in the notice, said Securities shall be paid and redeemed at the applicable redemption price for such series, together with interest accrued thereon to the date fixed for redemption (but if the date fixed for redemption is an interest payment date, the interest installment payable on such date shall be payable to the registered holder at the close of business on the applicable record date pursuant to Section 2.03).



(2) Upon presentation of any Security of such series that is to be redeemed in part only, the Company shall execute and the Trustee shall authenticate and the office or agency where the Security is presented shall deliver to the holder thereof, at the expense of the Company, a new Security of the same series of authorized denominations in principal amount equal to the unredeemed portion of the Security so presented.

#### **Section 3.04 Sinking Fund.**

The provisions of Sections 3.04, 3.05 and 3.06 shall be applicable to any sinking fund for the retirement of Securities of a series, except as otherwise specified as contemplated by Section 2.01 for Securities of such series.

The minimum amount of any sinking fund payment provided for by the terms of Securities of any series is herein referred to as a “mandatory sinking fund payment,” and any payment in excess of such minimum amount provided for by the terms of Securities of any series is herein referred to as an “optional sinking fund payment”. If provided for by the terms of Securities of any series, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 3.05. Each sinking fund payment shall be applied to the redemption of Securities of any series as provided for by the terms of Securities of such series.

#### **Section 3.05 Satisfaction of Sinking Fund Payments with Securities.**

The Company (i) may deliver Outstanding Securities of a series and (ii) may apply as a credit Securities of a series that have been redeemed either at the election of the Company pursuant to the terms of such Securities or through the application of permitted optional sinking fund payments pursuant to the terms of such Securities, in each case in satisfaction of all or any part of any sinking fund payment with respect to the Securities of such series required to be made pursuant to the terms of such Securities as provided for by the terms of such series, provided that such Securities have not been previously so credited. Such Securities shall be received and credited for such purpose by the Trustee at the redemption price specified in such Securities for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly.

#### **Section 3.06 Redemption of Securities for Sinking Fund.**

Not less than 45 days prior to each sinking fund payment date for any series of Securities (unless a shorter period shall be satisfactory to the Trustee), the Company will deliver to the Trustee an Officer’s Certificate specifying the amount of the next ensuing sinking fund payment for that series pursuant to the terms of the series, the portion thereof, if any, that is to be satisfied by delivering and crediting Securities of that series pursuant to Section 3.05 and the basis for such credit and will, together with such Officer’s Certificate, deliver to the Trustee any Securities to be so delivered. Not less than 30 days before each such sinking fund payment date the Trustee shall select the Securities to be redeemed upon such sinking fund payment date in the manner specified in Section 3.02 and cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in Section 3.02. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Section 3.03.

### **ARTICLE 4**

#### **COVENANTS**

#### **Section 4.01 Payment of Principal, Premium and Interest.**

The Company will duly and punctually pay or cause to be paid the principal of (and premium, if any) and interest on the Securities of that series at the time and place and in the manner provided herein and established with respect to such Securities. Payments of principal on the Securities may be made at the time provided herein and established with respect to such Securities by U.S. dollar check drawn on and mailed to the address of the Securityholder entitled thereto as such address shall appear in the Security Register, or U.S. dollar wire transfer to, a U.S. dollar account if such Securityholder shall have furnished wire instructions to the Trustee no later than 15 days prior to the relevant payment date. Payments of interest on the Securities may be made at the time provided herein and established with respect to such Securities by U.S. dollar check mailed to the address of the Securityholder entitled thereto as such address shall appear in the Security Register, or U.S. dollar wire transfer to, a U.S. dollar account if such Securityholder shall have furnished wire instructions in writing to the Security Registrar and the Trustee no later than 15 days prior to the relevant payment date.

#### **Section 4.02 Maintenance of Office or Agency.**

So long as any series of the Securities remain Outstanding, the Company agrees to maintain an office or agency with respect to each such series and at such other location or locations as may be designated as provided in this Section 4.02, where (i) Securities of that series may be presented for payment, (ii) Securities of that series may be presented as herein above authorized for registration of transfer and exchange, and (iii) notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be given or served, such designation to continue with respect to such office or agency until the Company shall, by written notice signed by any officer authorized to sign an Officer's Certificate and delivered to the Trustee, designate some other office or agency for such purposes or any of them. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, notices and demands. The Company initially appoints the Corporate Trust Office of the Trustee as its paying agent with respect to the Securities.

#### **Section 4.03 Paying Agents.**

(1) If the Company shall appoint one or more paying agents for all or any series of the Securities, other than the Trustee, the Company will cause each 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 held by it as such agent for the payment of the principal of (and premium, if any) or interest on the Securities of that series (whether such sums have been paid to it by the Company or by any other obligor of such Securities) in trust for the benefit of the Persons entitled thereto;

(b) that it will give the Trustee notice of any failure by the Company (or by any other obligor of such Securities) to make any payment of the principal of (and premium, if any) or interest on the Securities of that series when the same shall be due and payable;

(c) that it will, at any time during the continuance of any failure referred to in the preceding paragraph (a)(2) above, upon the written request of the Trustee, forthwith pay to the Trustee all sums so held in trust by such paying agent; and

(d) that it will perform all other duties of paying agent as set forth in this Indenture.

(2) If the Company shall act as its own paying agent with respect to any series of the Securities, it will on or before each due date of the principal of (and premium, if any) or interest on Securities of that series, set aside, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay such principal (and premium, if any) or interest so becoming due on Securities of that series until such sums shall be paid to such Persons or otherwise disposed of as herein provided and will promptly notify the Trustee of such action, or any failure (by it or any other obligor on such Securities) to take such action. Whenever the Company shall have one or more paying agents for any series of Securities, it will, prior to each due date of the principal of (and premium, if any) or interest on any Securities of that series, deposit with the paying agent a sum sufficient to pay the principal (and premium, if any) or interest so becoming due, such sum to be held in trust for the benefit of the Persons entitled to such principal, premium or interest, and (unless such paying agent is the Trustee) the Company will promptly notify the Trustee of this action or failure so to act.

(3) Notwithstanding anything in this Section to the contrary, (i) the agreement to hold sums in trust as provided in this Section is subject to the provisions of Section 11.05, and (ii) the Company may at any time, for the purpose of obtaining the satisfaction and discharge of this Indenture or for any other purpose, pay, or direct any paying agent to pay, to the Trustee all sums held in trust by the Company or such paying agent, such sums to be held by the Trustee upon the same terms and conditions as those upon which such sums were held by the Company or such paying agent; and, upon such payment by the Company or any paying agent to the Trustee, the Company or such paying agent shall be released from all further liability with respect to such money.

#### **Section 4.04 Appointment to Fill Vacancy in Office of Trustee.**

The Company, whenever necessary to avoid or fill a vacancy in the office of Trustee, will appoint, in the manner provided in Section 7.10, a Trustee, so that there shall at all times be a Trustee hereunder.

#### **Section 4.05 Compliance with Consolidation Provisions.**

The Company will not, while any of the Securities remain Outstanding, consolidate with or merge into any other Person, in either case where the Company is not the survivor of such transaction, or sell or convey all or substantially all of its property to any other Person unless the provisions of Article Ten hereof are complied with.

### **ARTICLE 5**

#### **SECURITYHOLDERS' LISTS AND REPORTS BY THE COMPANY AND THE TRUSTEE**

##### **Section 5.01 Company to Furnish Trustee Names and Addresses of Securityholders.**

The Company will furnish or cause to be furnished to the Trustee (a) within 15 days after each regular record date (as defined in Section 2.03) a list, in such form as the Trustee may reasonably require, of the names and addresses of the holders of each series of Securities as of such regular record date, provided that the Company shall not be obligated to furnish or cause to furnish such list at any time that the list shall not differ in any respect from the most recent list furnished to the Trustee by the Company and (b) at such other times as the Trustee may request in writing within 30 days after the receipt by the Company of any such request, a list of similar form and content as of a date not more than 15 days prior to the time such list is furnished; provided, however, that, in either case, no such list need be furnished for any series for which the Trustee shall be the Security Registrar.

##### **Section 5.02 Preservation Of Information; Communications With Securityholders.**

(1) The Trustee shall preserve, in as current a form as is reasonably practicable, all information as to the names and addresses of the holders of Securities contained in the most recent list furnished to it as provided in Section 5.01 and as to the names and addresses of holders of Securities received by the Trustee in its capacity as Security Registrar (if acting in such capacity)

(2) The Trustee may destroy any list furnished to it as provided in Section 5.01 upon receipt of a new list so furnished.

(3) Securityholders may communicate as provided in Section 312(b) of the Trust Indenture Act with other Securityholders with respect to their rights under this Indenture or under the Securities, and, in connection with any such communications, the Trustee shall satisfy its obligations under Section 312(b) of the Trust Indenture Act in accordance with the provisions of Section 312(b) of the Trust Indenture Act.

##### **Section 5.03 Reports by the Company.**

(1) The Company covenants and agrees to provide (which delivery may be via electronic mail) to the Trustee within 30 days, after the Company files the same with the Commission, copies of the annual reports and of the information, documents and other reports (or copies of such portions of any of the foregoing as the Commission may from time to time by rules and regulations prescribe) that the Company is required to file with the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act; provided, however, the Company shall not be required to deliver to the Trustee any materials for which the Company has sought and received confidential treatment by the Commission; and provided further, that so long as such filings by the Company are available on the

Commission's Electronic Data Gathering, Analysis and Retrieval System (EDGAR), or Interactive Data Electronic Applications (IDEA), or any successor system, such filings shall be deemed to have been filed with the Trustee for purposes hereof without any further action required by the Company; provided that an electronic link to such filing, together with an electronic notice of such filing have been sent to the Trustee. For the avoidance of doubt, a failure by the Company to file annual reports, information and other reports with the SEC within the time period prescribed thereof by the Commission shall not be deemed a breach of this Section 5.03.

(2) Delivery of reports, information and documents to the Trustee under Section 5.03 is for informational purposes only and the information and the Trustee's receipt of the foregoing shall not constitute constructive notice of any information contained therein, or determinable from information contained therein including the Company's compliance with any of their covenants thereunder (as to which the Trustee is entitled to rely exclusively on an Officer's Certificate).

#### **Section 5.04 Reports by the Trustee.**

(1) If required by Section 313(a) of the Trust Indenture Act, the Trustee, within sixty (60) days after each May 1, shall transmit by mail, first class postage prepaid, to the Securityholders, as their names and addresses appear upon the Security Register, a brief report dated as of such May 1, which complies with Section 313(a) of the Trust Indenture Act.

(2) The Trustee shall comply with Section 313(b) and 313(c) of the Trust Indenture Act.

(3) A copy of each such report shall, at the time of such transmission to Securityholders, be filed by the Trustee with the Company, with each securities exchange upon which any Securities are listed (if so listed) and also with the Commission. The Company agrees to notify the Trustee when any Securities become listed on any securities exchange.

### **ARTICLE 6**

#### **REMEDIES OF THE TRUSTEE AND SECURITYHOLDERS ON EVENT OF DEFAULT**

##### **Section 6.01 Events of Default.**

(1) Whenever used herein with respect to Securities of a particular series, "Event of Default" means any one or more of the following events that has occurred and is continuing:

(a) the Company defaults in the payment of any installment of interest upon any of the Securities of that series, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by the Company in accordance with the terms of any indenture supplemental hereto shall not constitute a default in the payment of interest for this purpose;

(b) the Company defaults in the payment of the principal of (or premium, if any, on) any of the Securities of that series as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to that series; provided, however, that a valid extension of the maturity of such Securities in accordance with the terms of any indenture supplemental hereto shall not constitute a default in the payment of principal or premium, if any;

(c) the Company fails to observe or perform any other of its covenants or agreements with respect to that series contained in this Indenture or otherwise established with respect to that series of Securities pursuant to Section 2.01 hereof (other than a covenant or agreement that has been expressly included in this Indenture solely for the benefit of one or more series of Securities other than such series) for a period of 90 days after the date on which written notice of such failure, requiring the same to be remedied and stating that such notice is a "Notice of Default" hereunder, shall have been given to the Company by the Trustee, by registered or certified mail, or to the Company and the Trustee by the holders of at least 25% in principal amount of the Securities of that series at the time Outstanding;

(d) the Company pursuant to or within the meaning of any Bankruptcy Law (i) commences a voluntary case, (ii) consents to the entry of an order for relief against it in an involuntary case, (iii) consents to the appointment of a Custodian of it or for all or substantially all of its property or (iv) makes a general assignment for the benefit of its creditors; or

(e) a court of competent jurisdiction enters an order under any Bankruptcy Law that (i) is for relief against the Company in an involuntary case, (ii) appoints a Custodian of the Company for all or substantially all of its property or (iii) orders the liquidation of the Company, and the order or decree remains unstayed and in effect for 90 days.

(2) In each and every such case (other than an Event of Default specified in clause (4) or clause (5) above), unless the principal of all the Securities of that 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 that series then Outstanding hereunder, by notice in writing to the Company (and to the Trustee if given by such Securityholders), may declare the principal of (and premium, if any, on) and accrued and unpaid interest on all the Securities of that series to be due and payable immediately, and upon any such declaration the same shall become and shall be immediately due and payable. If an Event of Default specified in clause (4) or clause (5) above occurs, the principal of and accrued and unpaid interest on all the Securities of that series shall automatically be immediately due and payable without any declaration or other act on the part of the Trustee or the holders of the Securities.

(3) At any time after the principal of (and premium, if any, on) and accrued and unpaid interest on the Securities of that series shall have been so declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered as hereinafter provided, the holders of a majority in aggregate principal amount of the Securities of that series then Outstanding hereunder, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if: (i) the Company has paid or deposited with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of that series and the principal of (and premium, if any, on) any and all Securities of that series that shall have become due otherwise than by acceleration (with interest upon such principal and premium, if any, and, to the extent that such payment is enforceable under applicable law, upon overdue installments of interest, at the rate per annum expressed in the Securities of that series to the date of such payment or deposit) and the amount payable to the Trustee under Section 7.06, and (ii) any and all Events of Default under the Indenture with respect to such series, other than the nonpayment of principal on (and premium, if any, on) and accrued and unpaid interest on Securities of that series that shall not have become due by their terms, shall have been remedied or waived as provided in Section 6.06.

No such rescission and annulment shall extend to or shall affect any subsequent default or impair any right consequent thereon.

(4) In case the Trustee shall have proceeded to enforce any right with respect to Securities of that series under this Indenture and such proceedings shall have been discontinued or abandoned because of such rescission or annulment or for any other reason or shall have been determined adversely to the Trustee, then and in every such case, subject to any determination in such proceedings, the Company and the Trustee shall be restored respectively to their former positions and rights hereunder, and all rights, remedies and powers of the Company and the Trustee shall continue as though no such proceedings had been taken.

#### **Section 6.02 Collection of Indebtedness and Suits for Enforcement by Trustee.**

(1) The Company covenants that (i) in case it shall default in the payment of any installment of interest on any of the Securities of a series, or in any payment required by any sinking or analogous fund established with respect to that series as and when the same shall have become due and payable, and such default shall have continued for a period of 90 days, or (ii) in case it shall default in the payment of the principal of (or premium, if any, on) any of the Securities of a series when the same shall have become due and payable, whether

upon maturity of the Securities of a series or upon redemption or upon declaration or otherwise then, upon demand of the Trustee, the Company will pay to the Trustee, for the benefit of the holders of the Securities of that series, the whole amount that then shall have been become due and payable on all such Securities for principal (and premium, if any) or interest, or both, as the case may be, with interest upon the overdue principal (and premium, if any) and (to the extent that payment of such interest is enforceable under applicable law) upon overdue installments of interest at the rate per annum expressed in the Securities of that series; and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, and the amount payable to the Trustee under Section 7.06.

(2) If the Company shall fail to pay such amounts forthwith 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 proceeding to judgment or final decree, and may enforce any such judgment or final decree against the Company or other obligor upon the Securities of that series and collect the moneys adjudged or decreed to be payable in the manner provided by law or equity out of the property of the Company or other obligor upon the Securities of that series, wherever situated.

(3) In case of any receivership, insolvency, liquidation, bankruptcy, reorganization, readjustment, arrangement, composition or judicial proceedings affecting the Company, or its creditors or property, the Trustee shall have power to intervene in such proceedings and take any action therein that may be permitted by the court and shall (except as may be otherwise provided by law) be entitled to file such proofs of claim and other papers and documents as may be necessary or advisable in order to have the claims of the Trustee and of the holders of Securities of such series allowed for the entire amount due and payable by the Company under the Indenture at the date of institution of such proceedings and for any additional amount that may become due and payable by the Company after such date, and to collect and receive any moneys or other property payable or deliverable on any such claim, and to distribute the same after the deduction of the amount payable to the Trustee under Section 7.06; and any receiver, assignee or trustee in bankruptcy or reorganization is hereby authorized by each of the holders of Securities of such series to make such payments to the Trustee, and, in the event that the Trustee shall consent to the making of such payments directly to such Securityholders, to pay to the Trustee any amount due it under Section 7.06.

(4) All rights of action and of asserting claims under this Indenture, or under any of the terms established with respect to Securities of that series, may be enforced by the Trustee without the possession of any of such Securities, or the production thereof at any trial or other proceeding relative thereto, and any such suit or proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for payment to the Trustee of any amounts due under Section 7.06, be for the ratable benefit of the holders of the Securities of such series.

In case of an Event of Default hereunder, the Trustee may in its discretion proceed to protect and enforce the rights vested in it by this Indenture by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any of such rights, either at law or in equity or in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in the 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.

Nothing contained herein shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Securityholder any plan of reorganization, arrangement, adjustment or composition affecting the Securities of that 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.

### **Section 6.03 Application of Moneys Collected.**

Any moneys collected by the Trustee pursuant to this Article with respect to a particular series of Securities shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such moneys on account of principal (or premium, if any) or interest, upon presentation of the Securities of that series, and notation thereon of the payment, if only partially paid, and upon surrender thereof if fully paid:

FIRST: To the payment of all indebtedness of the Company to which such series of Securities is subordinated to the extent required by Section 7.06 and any subordination terms of the series specified as contemplated by Article Fourteen;

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

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

#### **Section 6.04 Limitation on Suits.**

No holder of any Security of any series shall have any right by virtue or by availing of any provision of this Indenture or any Security to institute any suit, action or proceeding in equity or at law upon or under or with respect to this Indenture, any Security or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless (i) such holder previously shall have given to the Trustee written notice of an Event of Default and of the continuance thereof with respect to the Securities of such series specifying such Event of Default, as hereinbefore provided; (ii) 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, suit or proceeding in its own name as Trustee hereunder; (iii) such holder or holders shall have offered to the Trustee such reasonable indemnity as it may require against the costs, expenses and liabilities to be incurred therein or thereby; (iv) the Trustee for 90 days after its receipt of such notice, request and offer of indemnity, shall have failed to institute any such action, suit or proceeding and (v) during such 90 day period, the holders of a majority in principal amount of the Securities of that series do not give the Trustee a direction inconsistent with the request.

Notwithstanding anything contained herein to the contrary or any other provisions of this Indenture, the right of any holder of any Security to receive payment of the principal of (and premium, if any) and interest on such Security, as therein provided, on or after the respective due dates expressed in such Security (or in the case of redemption, on the redemption date), or to institute suit for the enforcement of any such payment on or after such respective dates or redemption date, shall not be impaired or affected without the consent of such holder and by accepting a Security hereunder it is expressly understood, intended and covenanted by the taker and holder of every Security of such series with every other such taker and holder and the Trustee, that no one or more holders of Securities of such series shall have any right in any manner whatsoever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of the holders of any other of such 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 such 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 6.05 Rights and Remedies Cumulative; Delay or Omission Not Waiver.**

(1) Except as otherwise provided in Section 2.07, all powers and remedies given by this Article to the Trustee or to the Securityholders shall, to the extent permitted by law, be deemed cumulative and not exclusive of any other powers and remedies available to the Trustee or the holders of the Securities, by judicial proceedings or otherwise, to enforce the performance or observance of the covenants and agreements contained in this Indenture or otherwise established with respect to such Securities.

(2) No delay or omission of the Trustee or of any holder of any of the Securities to exercise any right or power accruing upon any Event of Default occurring and continuing as aforesaid shall impair any such right or power, or shall be construed to be a waiver of any such default or an acquiescence therein; and, subject to the provisions of Section 6.04, every power and remedy given by this Article or by law to the Trustee or 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 6.06 Control by Securityholders.**

The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding, determined in accordance with Section 8.04, 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 such series; provided, however, that such direction shall not be in conflict with any rule of law or with this Indenture or subject the Trustee in its sole discretion to personal liability. Subject to the provisions of Section 7.01, the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall, by a Responsible Officer or officers of the Trustee, determine that the proceeding so directed, subject to the Trustee's duties under the Trust Indenture Act, would involve the Trustee in personal liability or might be unduly prejudicial to the Securityholders not involved in the proceeding. The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding affected thereby, determined in accordance with Section 8.04, may on behalf of the holders of all of the Securities of such series waive any past default in the performance of any of the covenants contained herein or established pursuant to Section 2.01 with respect to such series and its consequences, except a default in the payment of the principal of, or premium, if any, or interest on, any of the Securities of that series as and when the same shall become due by the terms of such Securities otherwise than by acceleration (unless such default has been cured and a sum sufficient to pay all matured installments of interest and principal and any premium has been deposited with the Trustee (in accordance with Section 6.01(3)). Upon any such waiver, the default covered thereby shall be deemed to be cured for all purposes of this Indenture and the Company, the Trustee and the holders of the Securities of such series shall be restored to their former positions and rights hereunder, respectively; but no such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

### **Section 6.07 Undertaking to Pay Costs.**

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

## **ARTICLE 7**

### **CONCERNING THE TRUSTEE**

#### **Section 7.01 Certain Duties and Responsibilities of Trustee.**

(1) The Trustee, prior to the occurrence of an Event of Default with respect to the Securities of a series and after the curing of all Events of Default with respect to the Securities of that series that may have occurred, shall undertake to perform with respect to the Securities of such series such duties and only such duties as are specifically set forth in this Indenture, and no implied covenants shall be read into this Indenture against the Trustee. In case an Event of Default with respect to the Securities of a series has occurred (that has not been cured or waived), the Trustee shall exercise with respect to Securities of that series 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 man would exercise or use under the circumstances in the conduct of his own affairs.

(2) 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:



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

(A) the duties and obligations of the Trustee shall with respect to the Securities of such series be determined solely by the express provisions of this Indenture, and the Trustee shall not be liable with respect to the Securities of such series 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

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

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

(c) the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the holders of not less than a majority in principal amount of the Securities of any series at the time Outstanding relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee under this Indenture with respect to the Securities of that series; and

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

### **Section 7.02 Certain Rights of Trustee.**

Except as otherwise provided in Section 7.01:

(1) The Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond, 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;

(2) Any request, direction, order or demand of the Company mentioned herein shall be sufficiently evidenced by a Board Resolution or an instrument signed in the name of the Company by any authorized officer of the Company (unless other evidence in respect thereof is specifically prescribed herein);

(3) The Trustee may consult with counsel and the written advice of such counsel or, if requested, any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken or suffered or omitted hereunder in good faith and in reliance thereon;

(4) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Securityholders pursuant to the provisions of this Indenture, unless such Securityholders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities that may be incurred therein or thereby; nothing contained herein shall, however, relieve the Trustee of the obligation, upon the occurrence of an Event of Default with respect to a series of the

Securities (that has not been cured or waived), to exercise with respect to Securities of that series such of the rights and powers vested in it by this Indenture, and to use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his own affairs;

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

(6) The Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond, security, or other papers or documents, unless requested in writing so to do by the holders of not less than a majority in principal amount of the Outstanding Securities of the particular series affected thereby (determined as provided in Section 8.04); provided, however, that if the payment within a reasonable time to the Trustee of the costs, expenses or liabilities likely to be incurred by it in the making of such investigation is, in the opinion of the Trustee, not reasonably assured to the Trustee by the security afforded to it by the terms of this Indenture, the Trustee may require reasonable indemnity against such costs, expenses or liabilities as a condition to so proceeding. The reasonable expense of every such examination shall be paid by the Company or, if paid by the Trustee, shall be repaid by the Company upon demand;

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

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

(9) In no event shall the Trustee be responsible or liable for special, indirect, or consequential loss or damage of any kind whatsoever (including, but not limited to, loss of profit) irrespective of whether the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action; and

(10) The Trustee agrees to accept and act upon instructions or directions pursuant to this Indenture sent by unsecured e-mail, facsimile transmission or other similar unsecured electronic methods; provided, however, that (a) the party providing such written instructions, subsequent to such transmission of written instructions, shall provide the originally executed instructions or directions to the Trustee in a timely manner, and (b) such originally executed instructions or directions shall be signed by an authorized representative of the party providing such instructions or directions. If the party elects to give the Trustee e-mail or facsimile instructions (or instructions by a similar electronic method) and the Trustee in its discretion elects to act upon such instructions, the Trustee's understanding of such instructions shall be deemed controlling. The Trustee shall not be liable for any losses, costs or expenses arising directly or indirectly from the Trustee's reliance upon and compliance with such instructions notwithstanding such instructions conflict or are inconsistent with a subsequent written instruction. The party providing electronic instructions agrees to assume all risks arising out of the use of such electronic methods to submit instructions and directions to the Trustee, including without limitation the risk of the Trustee acting on unauthorized instructions, and the risk of interception and misuse by third parties.

In addition, the Trustee shall not be deemed to have knowledge of any Default or Event of Default until the Trustee shall have received written notification in the manner set forth in this Indenture or a Responsible Officer of the Trustee shall have obtained actual knowledge.

### **Section 7.03 Trustee Not Responsible for Recitals or Issuance or Securities.**

(1) The recitals contained herein and in the Securities shall be taken as the statements of the Company, and the Trustee assumes no responsibility for the correctness of the same.

(2) The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Securities.

(3) The Trustee shall not be accountable for the use or application by the Company of any of the Securities or of the proceeds of such Securities, or for the use or application of any moneys paid over by the Trustee in accordance with any provision of this Indenture or established pursuant to Section 2.01, or for the use or application of any moneys received by any paying agent other than the Trustee.

### **Section 7.04 May Hold Securities.**

The Trustee or any paying agent or Security Registrar, 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 Trustee, paying agent or Security Registrar.

### **Section 7.05 Moneys Held in Trust.**

Subject to the provisions of Section 11.05, all moneys received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received, but need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for interest on any moneys received by it hereunder except such as it may agree with the Company to pay thereon.

### **Section 7.06 Compensation and Reimbursement.**

(1) The Company covenants and agrees to pay to the Trustee, and the Trustee shall be entitled to, such reasonable compensation (which shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust) as the Company and the Trustee may from time to time agree in writing, for all services rendered by it in the execution of the trusts hereby created and in the exercise and performance of any of the powers and duties hereunder of the Trustee, and, except as otherwise expressly provided herein, the Company will pay or reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by the Trustee 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 Persons not regularly in its employ), except any such expense, disbursement or advance as may arise from its negligence or bad faith and except as the Company and Trustee may from time to time agree in writing. The Company also covenants to indemnify the Trustee (and its officers, agents, directors and employees) for, and to hold it harmless against, any loss, liability or expense incurred without negligence or bad faith on the part of the Trustee and arising out of or in connection with the acceptance or administration of this trust, including the reasonable costs and expenses of defending itself against any claim of liability in the premises.

(2) The obligations of the Company under this Section to compensate and indemnify the Trustee and to pay or reimburse the Trustee for reasonable expenses, disbursements and advances shall constitute indebtedness of the Company to which the Securities are subordinated. Such additional indebtedness shall be secured by a lien prior 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.

(3) To ensure the Company's payment obligations in this Section, the Trustee shall have a lien prior to the Securities on all funds or property held or collected by the Trustee, except that held in trust to pay principal of or interest on particular Securities. When the Trustee incurs expenses or renders services in connection with an Event of Default specified in Section 6.01(1)(d) or (1)(e), the expenses (including the reasonable fees and expenses of its counsel) and the compensation for services in connection therewith are to constitute expenses of administration under any bankruptcy law. The provisions of this Section 7.06 shall survive the termination of this Indenture and the resignation or removal of the Trustee.

**Section 7.07 Reliance on Officer's Certificate.**

Except as otherwise provided in Section 7.01, whenever in the administration of the provisions of this Indenture the Trustee shall deem it reasonably necessary or desirable that a matter be proved or established prior to taking or suffering or omitting to take any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of negligence or bad faith on the part of the Trustee, be deemed to be conclusively proved and established by an Officer's Certificate delivered to the Trustee and such certificate, in the absence of negligence or bad faith on the part of the Trustee, shall be full warrant to the Trustee for any action taken, suffered or omitted to be taken by it under the provisions of this Indenture upon the faith thereof.

**Section 7.08 Disqualification; Conflicting Interests.**

If the Trustee has or shall acquire any "conflicting interest" within the meaning of Section 310(b) of the Trust Indenture Act, the Trustee and the Company shall in all respects comply with the provisions of Section 310(b) of the Trust Indenture Act.

**Section 7.09 Corporate Trustee Required; Eligibility.**

There shall at all times be a Trustee with respect to the Securities issued hereunder which shall at all times be a corporation organized and doing business under the laws of the United States of America or any state or territory thereof or of the District of Columbia, or a corporation or other Person permitted to act as trustee by the Commission, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least fifty million U.S. dollars (\$50,000,000), and subject to supervision or examination by federal, state, territorial, or District of Columbia authority.

If such corporation or other Person publishes reports of condition at least annually, pursuant to law or to the requirements of the aforesaid supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation or other Person shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. The Company may not, nor may any Person directly or indirectly controlling, controlled by, or under common control with the Company, serve as Trustee. In case at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section, the Trustee shall resign immediately in the manner and with the effect specified in Section 7.10.

**Section 7.10 Resignation and Removal; Appointment of Successor.**

(1) The Trustee or any successor hereafter appointed may at any time resign with respect to the Securities of one or more series by giving written notice thereof to the Company and by transmitting notice of resignation by mail, first class postage prepaid, to the Securityholders of such series, as their names and addresses appear upon the Security Register. Upon receiving such notice of resignation, the Company shall promptly appoint a successor trustee with respect to Securities of such series by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee. If no successor trustee shall have been so appointed and have accepted appointment within 30 days after the mailing of such notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor trustee with respect to Securities of such series, or any Securityholder of that series who has been a bona fide holder of a Security or Securities for at least six months may 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.

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

(a) the Trustee shall fail to comply with the provisions of Section 7.08 after written request therefor by the Company or by any Securityholder who has been a bona fide holder of a Security or Securities for at least six months; or

(b) the Trustee shall cease to be eligible in accordance with the provisions of Section 7.09 and shall fail to resign after written request therefor by the Company or by any such Securityholder; or

(c) the Trustee shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or commence a voluntary bankruptcy proceeding, or a receiver of the Trustee or of its property shall be appointed or consented to, 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 Company may remove the Trustee with respect to all Securities and appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor trustee, or any Securityholder who has been a bona fide holder of a Security or Securities for at least six months may, on behalf of that holder and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee. Such court may thereupon after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(3) The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding may at any time remove the Trustee with respect to such series by so notifying the Trustee and the Company and may appoint a successor Trustee for such series with the consent of the Company.

(4) Any resignation or removal of the Trustee and appointment of a successor trustee with respect to the Securities of a series pursuant to any of the provisions of this Section shall become effective upon acceptance of appointment by the successor trustee as provided in Section 7.11.

(5) Any successor trustee appointed pursuant to this Section may be appointed with respect to the Securities of one or more series or all of such series, and at any time there shall be only one Trustee with respect to the Securities of any particular series.

#### **Section 7.11 Acceptance of Appointment By Successor.**

(1) In case of the appointment hereunder of a successor trustee with respect to all Securities, every such successor trustee so appointed shall execute, acknowledge and deliver to the Company and to the retiring Trustee an instrument accepting such appointment, and thereupon the resignation or removal of the retiring Trustee shall become effective and such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee; but, on the request of the Company or the successor trustee, such retiring Trustee shall, upon payment of its charges, execute and deliver an instrument transferring to such successor trustee all the rights, powers, and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor trustee all property and money held by such retiring Trustee hereunder.

(2) In case of the appointment hereunder of a successor trustee with respect to the Securities of one or more (but not all) series, the Company, the retiring Trustee and each successor trustee with respect to the Securities of one or more series shall execute and deliver an indenture supplemental hereto wherein each successor trustee shall accept such appointment and which (i) shall contain such provisions as shall be necessary or desirable to transfer and confirm to, and to vest in, each successor trustee all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates, (ii) shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series as to which the retiring Trustee is not retiring shall continue to be vested in the retiring Trustee, and (iii) 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, that each such Trustee shall be trustee of a trust or trusts hereunder separate and apart from any trust or trusts hereunder administered by any other such Trustee and that no Trustee shall be responsible for any act or failure to act on the part of any other Trustee hereunder; and upon the execution and delivery of such supplemental indenture the resignation or removal of the retiring Trustee shall become effective to the extent provided therein, such retiring Trustee shall with respect to the Securities of that or

those series to which the appointment of such successor trustee relates have no further responsibility for the exercise of rights and powers or for the performance of the duties and obligations vested in the Trustee under this Indenture, and each such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates; but, on request of the Company or any successor trustee, such retiring Trustee shall duly assign, transfer and deliver to such successor trustee, to the extent contemplated by such supplemental indenture, the property and money held by such retiring Trustee hereunder with respect to the Securities of that or those series to which the appointment of such successor trustee relates.

(3) Upon request of any such successor trustee, the Company shall execute any and all instruments for more fully and certainly vesting in and confirming to such successor trustee all such rights, powers and trusts referred to in paragraph (a) or (b) of this Section, as the case may be.

(4) No successor trustee shall accept its appointment unless at the time of such acceptance such successor trustee shall be qualified and eligible under this Article.

(5) Upon acceptance of appointment by a successor trustee as provided in this Section, the Company shall transmit notice of the succession of such trustee hereunder by mail, first class postage prepaid, to the Securityholders, as their names and addresses appear upon the Security Register. If the Company fails to transmit such notice within ten days after acceptance of appointment by the successor trustee, the successor trustee shall cause such notice to be transmitted at the expense of the Company.

#### **Section 7.12 Merger, Conversion, Consolidation or Succession to Business.**

Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to the corporate trust business of the Trustee, including the administration of the trust created by this Indenture, shall be the successor of the Trustee hereunder, provided that such corporation shall be qualified under the provisions of Section 7.08 and eligible under the provisions of Section 7.09, 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 any Securities shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to such authenticating Trustee may adopt such authentication and deliver the Securities so authenticated with the same effect as if such successor Trustee had itself authenticated such Securities.

#### **Section 7.13 Preferential Collection of Claims Against the Company.**

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

#### **Section 7.14 Notice of Default**

If any Event of Default occurs and is continuing and if such Event of Default is known to a Responsible Officer of the Trustee, the Trustee shall mail to each Securityholder in the manner and to the extent provided in Section 313(c) of the Trust Indenture Act notice of the Event of Default within the earlier of 90 days after it occurs and 30 days after it is known to a Responsible Officer of the Trustee or written notice of it is received by the Trustee, unless such Event of Default has been cured; *provided, however*, that, except in the case of a default in the payment of the principal of (or premium, if any) or interest on any Security, 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 and/or Responsible Officers of the Trustee in good faith determine that the withholding of such notice is in the interest of the Securityholders.

## ARTICLE 8

### CONCERNING THE SECURITYHOLDERS

#### Section 8.01 Evidence of Action by Securityholders.

Whenever in this Indenture it is provided that the holders of a majority or specified percentage in aggregate principal amount of the Securities of a particular series may take any action (including the making of any demand or request, the giving of any notice, consent or waiver or the taking of any other action), the fact that at the time of taking any such action the holders of such majority or specified percentage of that series have joined therein may be evidenced by any instrument or any number of instruments of similar tenor executed by such holders of Securities of that series in person or by agent or proxy appointed in writing.

If the Company shall solicit from the Securityholders of any series any request, demand, authorization, direction, notice, consent, waiver or other action, the Company may, at its option, as evidenced by an Officer's Certificate, fix in advance a record date for such series for the determination of Securityholders entitled to give such request, demand, authorization, direction, notice, consent, waiver or other action, but the Company shall have no obligation to do so. If such a record date is fixed, such request, demand, authorization, direction, notice, consent, waiver or other action may be given before or after the record date, but only the Securityholders of record at the close of business on the record date shall be deemed to be Securityholders for the purposes of determining whether Securityholders of the requisite proportion of Outstanding Securities of that series have authorized or agreed or consented to such request, demand, authorization, direction, notice, consent, waiver or other action, and for that purpose the Outstanding Securities of that series shall be computed as of the record date; provided, however, that no such authorization, agreement or consent by such Securityholders on the record date shall be deemed effective unless it shall become effective pursuant to the provisions of this Indenture not later than six months after the record date.

#### Section 8.02 Proof of Execution by Securityholders.

Subject to the provisions of Section 7.01, proof of the execution of any instrument by a Securityholder (such proof will not require notarization) or his agent or proxy and proof of the holding by any Person of any of the Securities shall be sufficient if made in the following manner:

(1) The fact and date of the execution by any such Person of any instrument may be proved in any reasonable manner acceptable to the Trustee.

(2) The ownership of Securities shall be proved by the Security Register of such Securities or by a certificate of the Security Registrar thereof.

The Trustee may require such additional proof of any matter referred to in this Section as it shall deem necessary.

#### Section 8.03 Who May be Deemed Owners.

Prior to the due presentment for registration of transfer of any Security, the Company, the Trustee, any paying agent and any Security Registrar may deem and treat the Person in whose name such Security shall be registered upon the books of the Company as the absolute owner of such Security (whether or not such Security shall be overdue and notwithstanding any notice of ownership or writing thereon made by anyone other than the Security Registrar) for the purpose of receiving payment of or on account of the principal of, premium, if any, and (subject to Section 2.03) interest on such Security and for all other purposes; and neither the Company nor the Trustee nor any paying agent nor any Security Registrar shall be affected by any notice to the contrary.

#### **Section 8.04 Certain Securities Owned by Company Disregarded.**

In determining whether the holders of the requisite aggregate principal amount of Securities of a particular series have concurred in any direction, consent or waiver under this Indenture, the Securities of that series that are owned by the Company or any other obligor on the Securities of that series or by any Person directly or indirectly controlling or controlled by or under common control with the Company or any other obligor on the Securities of that series 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 of such series that the Trustee actually knows are so owned shall be so disregarded. The Securities so owned that have been pledged in good faith may be regarded as Outstanding for the purposes of this Section, if the pledgee shall establish to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not a Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Company or any such other obligor. In case of a dispute as to such right, any decision by the Trustee taken upon the advice of counsel shall be full protection to the Trustee.

#### **Section 8.05 Actions Binding on Future Securityholders.**

At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 8.01, of the taking of any action by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action, any holder of a Security of that series that is shown by the evidence to be included in the Securities the holders of which have consented to such action may, by filing written notice with the Trustee, and upon proof of holding as provided in Section 8.02, 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 Security issued in exchange therefor, on registration of transfer thereof or in place thereof, irrespective of whether or not any notation in regard thereto is made upon such Security. Any action taken by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action shall be conclusively binding upon the Company, the Trustee and the holders of all the Securities of that series.

### **ARTICLE 9**

#### **SUPPLEMENTAL INDENTURES**

##### **Section 9.01 Supplemental Indentures Without the Consent of Securityholders.**

In addition to any supplemental indenture otherwise authorized by this Indenture, the Company and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect), without the consent of the Securityholders, for one or more of the following purposes:

(1) to cure any ambiguity, defect, or inconsistency herein or in the Securities of any series;

(2) to comply with Article Ten;

(3) to provide for uncertificated Securities in addition to or in place of certificated Securities;

(4) to add to the covenants, restrictions, conditions or provisions relating to the Company for the benefit of the holders of all or any series of Securities (and if such covenants, restrictions, conditions or provisions are to be for the benefit of less than all series of Securities, stating that such covenants, restrictions, conditions or provisions are expressly being included solely for the benefit of such series), to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an Event of Default, or to surrender any right or power herein conferred upon the Company;

(5) to add to, delete from, or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication, and delivery of Securities, as herein set forth;

(6) to make any change that does not adversely affect the rights of any Securityholder in any material respect;



(7) to provide for the issuance of and establish the form and terms and conditions of the Securities of any series as provided in Section 2.01, to establish the form of any certifications required to be furnished pursuant to the terms of this Indenture or any series of Securities, or to add to the rights of the holders of any series of Securities;

(8) to evidence and provide for the acceptance of appointment hereunder by a successor trustee; or

(9) to comply with any requirements of the Commission or any successor in connection with the qualification of this Indenture under the Trust Indenture Act.

The Trustee is hereby authorized to join with the Company in the execution of any such supplemental indenture, and to make any further appropriate agreements and stipulations that may be therein contained, but the Trustee shall not be obligated to enter into any such supplemental indenture that 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 by the Company and the Trustee without the consent of the holders of any of the Securities at the time Outstanding, notwithstanding any of the provisions of Section 9.02.

#### **Section 9.02 Supplemental Indentures With Consent of Securityholders.**

With the consent (evidenced as provided in Section 8.01) of the holders of not less than a majority in aggregate principal amount of the Securities of each series affected by such supplemental indenture or indentures at the time Outstanding, the Company, when authorized by a Board Resolution, and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect) 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 not covered by Section 9.01 the rights of the holders of the Securities of such series under this Indenture; provided, however, that no such supplemental indenture shall, without the consent of the holders of each Security then Outstanding and affected thereby, (a) extend the fixed maturity of any Securities of any series, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon, or reduce any premium payable upon the redemption thereof or (b) reduce the aforesaid percentage of Securities, the holders of which are required to consent to any such supplemental indenture.

It shall not be necessary for the consent of the Securityholders of any series affected thereby 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.

#### **Section 9.03 Effect of Supplemental Indentures.**

Upon the execution of any supplemental indenture pursuant to the provisions of this Article or of Section 10.01, this Indenture shall, with respect to such series, 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 Company and the holders of Securities of the 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 9.04 Securities Affected by Supplemental Indentures.**

Securities of any series affected by a supplemental indenture, authenticated and delivered after the execution of such supplemental indenture pursuant to the provisions of this Article or of Section 10.01, may bear a notation in form approved by the Company, provided such form meets the requirements of any securities exchange upon which such series may be listed, as to any matter provided for in such supplemental indenture. If the Company

shall so determine, new Securities of that series so modified as to conform, in the opinion of the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may be prepared by the Company, authenticated by the Trustee and delivered in exchange for the Securities of that series then Outstanding.

#### **Section 9.05 Execution of Supplemental Indentures.**

Upon the request of the Company, accompanied by its Board Resolutions authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Securityholders required to consent thereto as aforesaid, the Trustee shall join with the Company 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. The Trustee, subject to the provisions of Section 7.01, shall receive an Officer's Certificate or an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant to this Article is authorized or permitted by the terms of this Article and that all conditions precedent to the execution of the supplemental indenture have been complied with; provided, however, that such Officer's Certificate or Opinion of Counsel need not be provided in connection with the execution of a supplemental indenture that establishes the terms of a series of Securities pursuant to Section 2.01 hereof.

Promptly after the execution by the Company and the Trustee of any supplemental indenture pursuant to the provisions of this Section, the Company shall (or shall direct the Trustee to) transmit by mail, first class postage prepaid, a notice, setting forth in general terms the substance of such supplemental indenture, to the Securityholders of all series affected thereby as their names and addresses appear upon the Security Register. Any failure of the Company to mail, or cause the mailing of, such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture.

### **ARTICLE 10**

#### **SUCCESSOR ENTITY**

##### **Section 10.01 Company May Consolidate, Etc.**

Nothing contained in this Indenture shall prevent any consolidation or merger of the Company with or into any other Person (whether or not affiliated with the Company) or successive consolidations or mergers in which the Company or its successor or successors shall be a party or parties, or shall prevent any sale, conveyance, transfer or other disposition of the property of the Company or its successor or successors as an entirety, or substantially as an entirety, to any other corporation (whether or not affiliated with the Company or its successor or successors) authorized to acquire and operate the same; provided, however, (a) the Company hereby covenants and agrees that, upon any such consolidation or merger (in each case, if the Company is not the survivor of such transaction), sale, conveyance, transfer or other disposition, the due and punctual payment of the principal of (premium, if any) and interest on all of the Securities of all series in accordance with the terms of each series, according to their tenor, and the due and punctual performance and observance of all the covenants and conditions of this Indenture with respect to each series or established with respect to such series pursuant to Section 2.01 to be kept or performed by the Company shall be expressly assumed, by supplemental indenture (which shall conform to the provisions of the Trust Indenture Act, as then in effect) reasonably satisfactory in form to the Trustee executed and delivered to the Trustee by the entity formed by such consolidation, or into which the Company shall have been merged, or by the entity which shall have acquired such property and (b) in the event that the Securities of any series then Outstanding are convertible into or exchangeable for shares of common stock or other securities of the Company, such entity shall, by such supplemental indenture, make provision so that the Securityholders of Securities of that series shall thereafter be entitled to receive upon conversion or exchange of such Securities the number of securities or property to which a holder of the number of shares of common stock or other securities of the Company deliverable upon conversion or exchange of those Securities would have been entitled had such conversion or exchange occurred immediately prior to such consolidation, merger, sale, conveyance, transfer or other disposition.

## **Section 10.02 Successor Entity Substituted.**

(1) In case of any such consolidation, merger, sale, conveyance, transfer or other disposition and upon the assumption by the successor entity by supplemental indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the obligations set forth under Section 10.01 on all of the Securities of all series Outstanding, such successor entity shall succeed to and be substituted for the Company with the same effect as if it had been named as the Company herein, and thereupon the predecessor corporation shall be relieved of all obligations and covenants under this Indenture and the Securities.

(2) In case of any such consolidation, merger, sale, conveyance, transfer 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.

(3) Nothing contained in this Article shall require any action by the Company in the case of a consolidation or merger of any Person into the Company where the Company is the survivor of such transaction, or the acquisition by the Company, by purchase or otherwise, of all or any part of the property of any other Person (whether or not affiliated with the Company).

## **ARTICLE 11**

### **SATISFACTION AND DISCHARGE**

#### **Section 11.01 Satisfaction and Discharge of Indenture.**

If at any time: (a) the Company shall have delivered to the Trustee for cancellation all Securities of a series theretofore authenticated and not delivered to the Trustee for cancellation (other than any Securities that shall have been destroyed, lost or stolen and that shall have been replaced or paid as provided in Section 2.07 and Securities for whose payment money or Governmental Obligations have theretofore been deposited in trust or segregated and held in trust by the Company and thereupon repaid to the Company or discharged from such trust, as provided in Section 11.05); or (b) all such Securities of a particular series not theretofore delivered to the Trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption, and the Company shall deposit or cause to be deposited with the Trustee as trust funds the entire amount in moneys or Governmental Obligations or a combination thereof, sufficient in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay at maturity or upon redemption all Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder with respect to such series by the Company then this Indenture shall thereupon cease to be of further effect with respect to such series except for the provisions of Sections 2.03, 2.05, 2.07, 4.01, 4.02, 4.03 and 7.10, that shall survive until the date of maturity or redemption date, as the case may be, and Sections 7.06 and 11.05, that shall survive to such date and thereafter, and the Trustee, on demand of the Company and at the cost and expense of the Company shall execute proper instruments acknowledging satisfaction of and discharging this Indenture with respect to such series.

#### **Section 11.02 Discharge of Obligations.**

If at any time all such Securities of a particular series not heretofore delivered to the Trustee for cancellation or that have not become due and payable as described in Section 11.01 shall have been paid by the Company by depositing irrevocably with the Trustee as trust funds moneys or an amount of Governmental Obligations sufficient to pay at maturity or upon redemption all such Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder by the Company with respect to such series, then after the date such moneys or Governmental Obligations, as the case may be, are deposited with the Trustee the obligations of the Company under this Indenture with respect to such series shall cease to be of further effect except for the provisions of Sections 2.03, 2.05, 2.07, 4.01, 4.02, 4.03, 7.06, 7.10 and 11.05 hereof that shall survive until such Securities shall mature and be paid.

Thereafter, Sections 7.06 and 11.05 shall survive.

**Section 11.03 Deposited Moneys to be Held in Trust.**

All moneys or Governmental Obligations deposited with the Trustee pursuant to Sections 11.01 or 11.02 shall be held in trust and shall be available for payment as due, either directly or through any paying agent (including the Company acting as its own paying agent), to the holders of the particular series of Securities for the payment or redemption of which such moneys or Governmental Obligations have been deposited with the Trustee.

**Section 11.04 Payment of Moneys Held by Paying Agents.**

In connection with the satisfaction and discharge of this Indenture all moneys or Governmental Obligations then held by any paying agent under the provisions of this Indenture shall, upon demand of the Company, be paid to the Trustee and thereupon such paying agent shall be released from all further liability with respect to such moneys or Governmental Obligations.

**Section 11.05 Repayment to Company.**

Any moneys or Governmental Obligations deposited with any paying agent or the Trustee, or then held by the Company, in trust for payment of principal of or premium, if any, or interest on the Securities of a particular series that are not applied but remain unclaimed by the holders of such Securities for at least two years after the date upon which the principal of (and premium, if any) or interest on such Securities shall have respectively become due and payable, or such other shorter period set forth in applicable escheat or abandoned or unclaimed property law, shall be repaid to the Company on May 31 of each year or upon the Company's request or (if then held by the Company) shall be discharged from such trust; and thereupon the paying agent and the Trustee shall be released from all further liability with respect to such moneys or Governmental Obligations, and the holder of any of the Securities entitled to receive such payment shall thereafter, as a general creditor, look only to the Company for the payment thereof.

**ARTICLE 12**

**IMMUNITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS AND DIRECTORS**

**Section 12.01 No Recourse.**

No recourse under or upon any obligation, covenant or agreement of this Indenture, or of any Security, or for any claim based thereon or otherwise in respect thereof, shall be had against any incorporator, stockholder, officer or director, past, present or future as such, of the Company or of any predecessor or successor corporation, either directly or through the Company or any such predecessor or successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly understood that this Indenture and the obligations issued hereunder are solely corporate obligations, and that no such personal liability whatever shall attach to, or is or shall be incurred by, the incorporators, stockholders, officers or directors as such, of the Company or of any predecessor or successor corporation, or any of them, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom; and that any and all such personal liability of every name and nature, either at common law or in equity or by constitution or statute, of, and any and all such rights and claims against, every such incorporator, stockholder, officer or director as such, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom, are hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issuance of such Securities.

## ARTICLE 13

### MISCELLANEOUS PROVISIONS

#### **Section 13.01 Effect on Successors and Assigns.**

All the covenants, stipulations, promises and agreements in this Indenture made by or on behalf of the Company shall bind its successors and assigns, whether so expressed or not.

#### **Section 13.02 Actions by Successor.**

Any act or proceeding by any provision of this Indenture authorized or required to be done or performed by any board, committee or officer of the Company shall and may be done and performed with like force and effect by the corresponding board, committee or officer of any corporation that shall at the time be the lawful successor of the Company.

#### **Section 13.03 Surrender of Company Powers.**

The Company by instrument in writing executed by authority of its Board of Directors and delivered to the Trustee may surrender any of the powers reserved to the Company, and thereupon such power so surrendered shall terminate both as to the Company and as to any successor corporation.

#### **Section 13.04 Notices.**

Except as otherwise expressly provided herein, any notice, request or demand that by any provision of this Indenture is required or permitted to be given, made or served by the Trustee or by the holders of Securities or by any other Person pursuant to this Indenture to or on the Company may be given or served by being deposited in first class mail, postage prepaid, addressed (until another address is filed in writing by the Company with the Trustee), as follows: . Any notice, election, request or demand by the Company or any Securityholder or by any other Person pursuant to this Indenture to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or made in writing at the Corporate Trust Office of the Trustee.

#### **Section 13.05 Governing Law.**

This Indenture and each Security shall be deemed to be a contract made under the internal laws of the State of New York, and for all purposes shall be construed in accordance with the laws of said State, except to the extent that the Trust Indenture Act is applicable.

#### **Section 13.06 Treatment of Securities as Debt.**

It is intended that the Securities will be treated as indebtedness and not as equity for federal income tax purposes. The provisions of this Indenture shall be interpreted to further this intention.

#### **Section 13.07 Certificates and Opinions as to Conditions Precedent.**

(1) Upon any application or demand by the Company to the Trustee to take any action under any of the provisions of this Indenture, the Company shall furnish to the Trustee an Officer's Certificate stating that all conditions precedent provided for in this Indenture (other than the certificate to be delivered pursuant to Section 13.12) relating to the proposed action have been complied with and, if requested, 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.

(2) Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant in this Indenture shall include (i) a statement that the Person making such certificate or opinion has read such covenant or condition; (ii) 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; (iii) a statement that, in the opinion of such Person, he has made such examination or investigation as is reasonably necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and (iv) a statement as to whether or not, in the opinion of such Person, such condition or covenant has been complied with.

#### **Section 13.08 Payments on Business Days.**

Except as provided pursuant to Section 2.01 pursuant to a Board Resolution, and set forth in an Officer's Certificate, or established in one or more indentures supplemental to this Indenture, in any case where the date of maturity of interest or principal of any Security or the date of redemption of any Security shall not be a Business Day, then payment of interest or principal (and premium, if any) may be made on the next succeeding Business Day with the same force and effect as if made on the nominal date of maturity or redemption, and no interest shall accrue for the period after such nominal date.

#### **Section 13.09 Conflict with Trust Indenture Act.**

If and to the extent that any provision of this Indenture limits, qualifies or conflicts with the duties imposed by Sections 310 to 317, inclusive, of the Trust Indenture Act, such imposed duties shall control.

#### **Section 13.10 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 13.11 Separability.**

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

#### **Section 13.12 Compliance Certificates.**

The Company shall deliver to the Trustee, within 120 days after the end of each fiscal year during which any Securities of any series were outstanding, an officer's certificate stating whether or not the signers know of any Event of Default that occurred during such fiscal year. Such certificate shall contain a certification from the principal executive officer, principal financial officer or principal accounting officer of the Company that a review has been conducted of the activities of the Company and the Company's performance under this Indenture and that the Company has complied with all conditions and covenants under this Indenture. For purposes of this Section 13.12, such compliance shall be determined without regard to any period of grace or requirement of notice provided under this Indenture. If the officer of the Company signing such certificate has knowledge of such an Event of Default, the certificate shall describe any such Event of Default and its status.

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**ARTICLE 14**

**SUBORDINATION OF SECURITIES**

**Section 14.01 Subordination Terms.**

The payment by the Company of the principal of, premium, if any, and interest on any series of Securities issued hereunder shall be subordinated to the extent set forth in an indenture supplemental hereto relating to such series.

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

**IKENA ONCOLOGY, INC.**

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

**[TRUSTEE]**, as Trustee

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



**CROSS-REFERENCE TABLE(2)**

<u>Section of Trust Indenture Act of 1939, as Amended</u>	<u>Section of Indenture</u>
310(a)	7.09
310(b)	7.08 7.10
310(c)	Inapplicable
311(a)	7.13
311(b)	7.13
311(c)	Inapplicable
312(a)	5.01 5.02(1)
312(b)	5.02(3)
312(c)	5.02(3)
313(a)	5.04(1)
313(b)	5.04(2)
313(c)	5.04(1) 5.04(2)
313(d)	5.04(3)
314(a)	5.03 13.12
314(b)	Inapplicable
314(c)	13.07(1)
314(d)	Inapplicable
314(e)	13.07(2)
314(f)	Inapplicable
315(a)	7.01(1) 7.01(2)
315(b)	7.14
315(c)	7.01
315(d)	7.01(2)
315(e)	6.07
316(a)	6.06 8.04
316(b)	6.04
316(c)	8.01
317(a)	6.02
317(b)	4.03
318(a)	13.09

<sup>2</sup> This Cross-Reference Table does not constitute part of the Indenture and shall not have any bearing on the interpretation of any of its terms or provisions.



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April 27, 2022

Ikena Oncology, Inc.  
645 Summer Street, Suite 101  
Boston, MA 02210

Re: Securities Being Registered under Registration Statement on Form S-3

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-3 (as amended or supplemented, the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the offering by Ikena Oncology, Inc., a Delaware corporation (the "Company"), of up to \$300,000,000 of any combination of (i) common stock, par value \$0.001 per share (the "Common Stock"), of the Company, (ii) preferred stock, par value \$0.001 per share, of the Company (the "Preferred Stock"), (iii) debt securities of the Company ("Debt Securities"), (iv) warrants to purchase Common Stock, Preferred Stock, Debt Securities or Units (as defined below) ("Warrants"), (v) units comprised of Common Stock, Preferred Stock, Debt Securities, Warrants and other securities in any combination ("Units"). The Common Stock, Preferred Stock, Debt Securities, Warrants, and Units are sometimes referred to collectively herein as the "Securities." Securities may be issued in an unspecified number (with respect to Common Stock, Preferred Stock, Warrants, and Units) or in an unspecified principal amount (with respect to Debt Securities). The Registration Statement provides that the Securities may be offered separately or together, in separate series, in amounts, at prices and on terms to be set forth in one or more prospectus supplements (each a "Prospectus Supplement") to the prospectus contained in the Registration Statement.

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company.

The opinions set forth below are limited to the Delaware General Corporation Law and the law of New York.

For purposes of the opinions set forth below, without limiting any other exceptions or qualifications set forth herein, we have assumed that (i) each of the Debt Securities, Warrants and Units, and the indentures, warrant agreements, unit agreements and other agreements governing Securities offered pursuant to the Registration Statement will be governed by the internal law of New York and (ii) after the issuance of any Securities offered pursuant to the Registration Statement, the total number of issued shares of Common Stock or Preferred Stock, as applicable, together with the total number of shares of such stock issuable upon the exercise, exchange, conversion or settlement, as the case may be, of any exercisable, exchangeable or convertible security (including without limitation any Unit), as the case may be, then outstanding, will not exceed the total number of authorized shares of Common Stock or Preferred Stock, as applicable, available for issuance under the Company's certificate of incorporation as then in effect (the "Charter").

For purposes of the opinions set forth below, we refer to the following as the "Future Authorization and Issuance" of Securities:

- with respect to any of the Securities, (a) the authorization by the Company of the amount, terms and issuance of such Securities (the "Authorization") and (b) the issuance of such Securities in accordance with the Authorization therefor upon the receipt by the Company of the consideration (which, in the case of shares of Common Stock or Preferred Stock, is not less than the par value of such shares) to be paid therefor in accordance with the Authorization;
- with respect to Preferred Stock, (a) the establishment of the terms of such Preferred Stock by the Company in conformity with the Charter and applicable law and (b) the execution, acknowledgement and filing with the Delaware Secretary of State, and the effectiveness of, a certificate of designations to the Charter setting forth the terms of such Preferred Stock in accordance with the Charter and applicable law;
- with respect to Debt Securities, (a) the authorization, execution and delivery of the indenture or a supplemental indenture relating to such Securities by the Company and the trustee thereunder and/or (b) the establishment of the terms of such Securities by the Company in conformity with the applicable indenture or supplemental indenture and applicable law, and (c) the execution, authentication and issuance of such Securities in accordance with the applicable indenture or supplemental indenture and applicable law; and
- with respect to Warrants or Units, (a) the authorization, execution and delivery by the Company and the other parties thereto of any agreement under which such Securities are to be issued, and (b) the establishment of the terms of such Securities and the issuance of such Securities in conformity with those terms, the terms of any applicable agreement and applicable law.

Based upon the foregoing, and subject to the additional qualifications set forth below, we are of the opinion that:

1. Upon the Future Authorization and Issuance of shares of Common Stock, such shares of Common Stock will be validly issued, fully paid and nonassessable.
2. Upon the Future Authorization and Issuance of shares of Preferred Stock, such shares of Preferred Stock will be validly issued, fully paid and nonassessable.
3. Upon the Future Authorization and Issuance of Debt Securities, such Debt Securities will be valid and binding obligations of the Company.
4. Upon the Future Authorization and Issuance of Warrants, such Warrants will be valid and binding obligations of the Company.
5. Upon the Future Authorization and Issuance of Units, such Units will be valid and binding obligations of the Company.

The opinions expressed above are subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors and to general principles of equity.

This opinion letter and the opinions it contains shall be interpreted in accordance with the Core Opinion Principles as published in *74 Business Lawyer* 815 (Summer 2019).

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption "Legal Matters" in the Registration Statement. 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/ GOODWIN PROCTER LLP

GOODWIN PROCTER LLP



Goodwin Procter LLP  
100 Northern Avenue  
Boston, MA 02210

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+1 617 570 1000

April 27, 2022

Ikena Oncology, Inc.

645 Summer Street, Suite 101  
Boston, MA 02210

Re: Securities Registered under Registration Statement on Form S-3

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-3 (as amended or supplemented, the "Registration Statement") filed on April 27, 2022 with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration of the offering by Ikena Oncology, Inc., a Delaware corporation (the "Company") of up to \$300,000,000 of any combination of securities of the types specified therein. Reference is made to our opinion letter dated April 27, 2022 and included as Exhibit 5.1 to the Registration Statement. We are delivering this supplemental opinion letter in connection with the sale agreement prospectus (the "Prospectus") contained in the Registration Statement. The Prospectus relates to the offering by the Company of up to \$100,000,000 in shares (the "Shares") of the Company's common stock, par value \$0.001 per share ("Common Stock") covered by the Registration Statement. The Shares are being offered and sold by the sales agent named in, and pursuant to, the Open Market Sale Agreement, dated April 27, 2022, among the Company and such sales agent.

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinion set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

For purposes of the opinion set forth below, we have assumed that the Shares are issued for a price per share equal to or greater than the minimum price authorized by the Company's board of directors (or a duly authorized committee of the board of directors) prior to the date hereof (the "Minimum Price") and that no event occurs that causes the number of authorized shares of Common Stock available for issuance by the Company to be less than the number of then unissued Shares that may be issued for the Minimum Price.

For purposes of the opinion set forth below, we refer to the following as “Future Approval and Issuance”: (a) the approval by the Company’s board of directors (or a duly authorized committee of the board of directors) of the issuance of the Shares (the “Approval”) and (b) the issuance of the Shares in accordance with the Approval and the receipt by the Company of the consideration (which shall not be less than the par value of such Shares) to be paid in accordance with the Approval.

The opinion set forth below is limited to the Delaware General Corporation Law.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon Future Approval and Issuance, will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion letter as Exhibit 5.2 to the Registration Statement and its incorporation by reference and the reference to our firm under the caption “Legal Matters” in the Registration Statement. 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/ GOODWIN PROCTER LLP

GOODWIN PROCTER LLP

**Consent of Independent Registered Public Accounting Firm**

We consent to the reference to our firm under the caption “Experts” in this Registration Statement (Form S-3) and related Prospectus of Ikena Oncology, Inc. for the registration of debt securities, common stock, preferred stock, units and/or warrants and to the incorporation by reference therein of our report dated March 17, 2022, with respect to the consolidated financial statements of Ikena Oncology, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2021, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts  
April 27, 2022

## Calculation of Filing Fee Tables

**Form S-3**  
(Form Type)Ikena Oncology, Inc.  
(Exact Name of Registrant as Specified in its Charter)Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered (1)	Proposed Maximum Offering Price Per Unit (2)	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>												
<b>Primary Offering of Securities:</b>												
Fees to Be Paid	Equity	Common Stock, par value \$0.001 per share (3)	457(o)	—	—	—	—	—				
Fees to Be Paid	Equity	Preferred Stock (4)	457(o)	—	—	—	—	—				
Fees to Be Paid	Debt	Debt Securities (5)	457(o)	\$—	\$—	\$—	—	\$—				
Fees to Be Paid	Equity	Warrants (6)	457(o)	—	—	—	—	—				
Fees to Be Paid	Equity	Units (7)	457(o)	—	—	—	—	—				
Fees to Be Paid	Unallocated (Universal) Shelf	(1)	457(o)	\$300,000,000	—	\$300,000,000	0.0000927	\$27,810				
Fees to Be Paid	Total Registration Fee:			\$300,000,000	N/A	\$300,000,000	—	\$27,810				
<b>Carry Forward Securities</b>												
Carry Forward Securities	—	—	—	—	—	—	—	—	—	—	—	—
Total Offering Amounts						\$300,000,000		\$27,810				
Total Fees Previously Paid								—				
Total Fee Offsets								—				
Net Fee Due								\$27,810				

- (1) The amount to be registered consists of up to \$300,000,000 of an indeterminate amount of common stock, preferred stock, debt securities, warrants 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 debt securities, common stock, preferred stock or units as may be issued upon exercise of warrants registered hereby, as the case may be, including under any applicable antidilution provisions. Any securities registered hereunder may be sold separately or together with other securities registered hereunder. Pursuant to Rule 416 under the Securities Act of 1933, as amended, this registration statement also covers any additional securities that may be offered or issued in connection with any stock split, stock dividend or pursuant to anti-dilution provisions of any of the securities. Separate consideration may or may not be received for securities that are issuable upon conversion, exercise or exchange of other securities.



- (2) The proposed maximum offering price per security will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered hereunder and is not specified as to each class of security pursuant to General Instruction II.D. of Form S-3 under the Securities Act of 1933, as amended.
- (3) Including such indeterminate amount of common stock as may be issued from time to time at indeterminate prices or upon conversion of debt securities and/or preferred stock registered hereby, or upon exercise of warrants registered hereby, as the case may be.
- (4) Including such indeterminate amount of preferred stock as may be issued from time to time at indeterminate prices or upon conversion of debt securities and/or preferred stock registered hereby, or upon exercise of warrants registered hereby, as the case may be.
- (5) Including such indeterminate principal amount of debt securities as may be issued from time to time at indeterminate prices or upon exercise of warrants registered hereby, as the case may be.
- (6) Warrants may be sold separately or together with any of the securities registered hereby and may be exercisable for shares of common stock, preferred stock, debt securities, or units registered hereby. Because the warrants will provide a right only to purchase such securities offered hereunder, no additional registration fee is required.
- (7) Each unit will be issued under a unit agreement and will represent an interest in two or more securities registered pursuant to this registration statement, which may or may not be separable from one another. Because the units will provide a right only to purchase such securities offered hereunder, no additional registration fee is required.