

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

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): January 10, 2025

AMYLYX PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-41199
(Commission
File Number)

46-4600503
(IRS Employer
Identification No.)

**43 Thorndike St.,
Cambridge, MA**
(Address of principal executive offices)

02141
(Zip Code)

Registrant's telephone number, including area code: (617) 682-0917

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.0001 par value per share	AMLX	Nasdaq Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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 13(a) of the Exchange Act.

Item 1.01. Entry into a Material Definitive Agreement.

On January 10, 2025, Amylyx Pharmaceuticals, Inc. (“Amylyx” or the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Leerink Partners LLC, as representative of the several underwriters named therein (the “Underwriter”), relating to the issuance and sale of an aggregate of 17,142,857 shares (the “Firm Shares”) of the Company’s common stock, par value \$0.0001 per share (“Common Stock”), at a price to the public of \$3.50 per share (the “Offering”). Pursuant to the Underwriting Agreement, the Company also granted the Underwriter a 30-day option to purchase up to 2,571,428 additional shares of Common Stock at the public offering price less the underwriting discounts and commissions (the “Option Shares” and together with the Firm Shares, the “Shares”).

The aggregate net proceeds to the Company, after deducting underwriting discounts and commissions and other estimated offering expenses payable by the Company, will be approximately \$56.9 million, or approximately \$65.5 million if the option to purchase the Option Shares is exercised in full by the Underwriter. Amylyx intends to use the net proceeds from this offering, together with existing cash, cash equivalents and marketable securities, to advance preparations for commercialization and pipeline programs, for working capital and for general corporate purposes. The Offering is expected to close on January 13, 2025, subject to customary closing conditions. All of the Shares in the Offering are being sold by the Company.

The Underwriting Agreement contains customary representations and warranties, conditions to closing, market standoff provisions, termination provisions and indemnification obligations, including for liabilities under the Securities Act of 1933, as amended. The representations, warranties and covenants contained in the Underwriting Agreement were made only for purposes of such agreement and as of specific dates, and were solely for the benefit of the parties to the Underwriting Agreement.

The Offering is being made pursuant to a prospectus supplement, dated January 10, 2025 (the “Prospectus Supplement”), filed with the Securities and Exchange Commission (“SEC”) on January 10, 2025 and an accompanying base prospectus that forms a part of the registration statement on Form S-3ASR (File No. 333- 270505), filed with the SEC on March 13, 2023, which was effective upon filing with the SEC. This Current Report on Form 8-K does not constitute an offer to sell or a solicitation of an offer to buy shares of Common Stock.

The foregoing description of certain terms of the Underwriting Agreement and the transactions contemplated thereby does not purport to be complete and is subject to and qualified in its entirety by reference to the full text of the Underwriting Agreement that is filed as Exhibit 1.1 to this Current Report on Form 8-K and is incorporated by reference herein.

The legal opinion of Goodwin Procter LLP relating to the legality of the issuance and sale of the Shares in the Offering is filed as Exhibit 5.1 to this Current Report on Form 8-K.

Forward Looking Statements

Statements contained in this Current Report on Form 8-K regarding matters that are not historical facts are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including with respect to the completion of the proposed Offering, the anticipated closing date of the Offering, the expected amount of proceeds from the Offering and the expected use of proceeds from the offering. No assurance can be given that the Offering discussed above will be completed. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Any forward-looking statements in this Current Report on Form 8-K are based on management’s current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. Risks that contribute to the uncertain nature of the forward-looking statements include those risks and uncertainties set forth in Amylyx’ SEC filings, including Amylyx’ Annual Report on Form 10-K for the year ended December 31, 2023, Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2024, and subsequent filings with the SEC. All forward-looking statements contained in this Current Report on Form 8-K speak only as of the date on which they were made. Amylyx undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made. In light of the foregoing, investors are urged not to rely on any forward-looking statement in reaching any conclusion or making any investment decision about any securities of Amylyx.

Item 9.01. Financial Statements and Exhibits.**(d) Exhibits**

Exhibit No.	Description
1.1	Underwriting Agreement, dated January 10, 2025
5.1	Opinion of Goodwin Procter LLP
23.1	Consent of Goodwin Procter LLP (included in Exhibit 5.1)
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

AMYLYX PHARMACEUTICALS, INC.

Date: January 10, 2025

By: /s/ James M. Frates
James M. Frates
Chief Financial Officer

Amylyx Pharmaceuticals, Inc.

Common Stock

Underwriting Agreement

January 10, 2025

Leerink Partners LLC

As representative (the "Representative") of the several Underwriters
named in Schedule I hereto,

c/o Leerink Partners LLC
53 State Street, 40th Floor
Boston, MA 02109

Ladies and Gentlemen:

Amylyx Pharmaceuticals, Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated in this agreement (this "Agreement"), to issue and sell to the Underwriters named in Schedule I hereto (the "Underwriters") an aggregate of 17,142,857 shares of common stock, par value \$0.0001 per share ("Stock"), of the Company (the "Firm Shares"). In addition, the Company has granted the Underwriters an option to purchase, at the election of the Underwriters, up to 2,571,428 additional shares (the "Optional Shares") of Stock (the Firm Shares and the Optional Shares that the Underwriters elect to purchase pursuant to Section 2 hereof being collectively called the "Shares"). To the extent there are no additional Underwriters listed on Schedule I other than the Representative, the term Underwriters shall mean either the singular or plural as the context requires.

1. The Company represents and warrants to, and agrees with, each of the Underwriters that:

(a) An "automatic shelf registration statement" as defined under Rule 405 under the Securities Act of 1933, as amended (the "Act") on Form S-3 (File No. 333-270505) in respect of the Shares has been filed with the Securities and Exchange Commission (the "Commission") not earlier than three years prior to the date hereof; such registration statement, and any post-effective amendment thereto became effective upon filing; and no stop order suspending the effectiveness of such registration statement or any part thereof has been issued and no proceeding for that purpose has been initiated or, to the Company's knowledge, threatened by the Commission, and no notice of objection of the Commission to the use of such registration statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act has been received by the Company (the base prospectus filed as part of such registration statement, in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement, is

hereinafter called the “Base Prospectus”); any preliminary prospectus (including any preliminary prospectus supplement) relating to the Shares filed with the Commission pursuant to Rule 424(b) under the Act is hereinafter called a “Preliminary Prospectus;” the various parts of such registration statement, including all exhibits thereto and any prospectus supplement relating to the Shares that is filed with the Commission and deemed by virtue of Rule 430B to be part of such registration statement, each as amended at the time such part of the registration statement became effective, are hereinafter collectively called the “Registration Statement;” the Base Prospectus, as amended and supplemented immediately prior to the Applicable Time (as defined in Section 1(c) hereof), is hereinafter called the “Pricing Prospectus;” the form of the final prospectus (including any final prospectus supplement) relating to the Shares filed with the Commission pursuant to Rule 424(b) under the Act in accordance with Section 5(a) hereof is hereinafter called the “Prospectus;” any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Act or Rule 163B under the Act is hereinafter called a “Testing-the-Waters Communication;” any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Act is hereinafter called a “Written Testing-the-Waters Communication;” any reference herein to the Base Prospectus, the Pricing Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Act, as of the date of such prospectus; any reference to any amendment or supplement to the Base Prospectus, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any post-effective amendment to the Registration Statement, any prospectus supplement relating to the Shares filed with the Commission pursuant to Rule 424(b) under the Act and any documents filed under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and incorporated therein, in each case after the date of the Base Prospectus, such Preliminary Prospectus or the Prospectus, as the case may be; any reference to any amendment to the Registration Statement shall be deemed to refer to and include any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act after the effective date of the Registration Statement that is incorporated by reference in the Registration Statement; any “issuer free writing prospectus” as defined in Rule 433 under the Act relating to the Shares is hereinafter called an “Issuer Free Writing Prospectus”); and any “bona fide electronic road show” as defined in Rule 433(h)(5) under the Act that has been made available without restriction to any person is hereinafter called a “broadly available road show;”

(b) (A) No order preventing or suspending the use of any Preliminary Prospectus or any Issuer Free Writing Prospectus has been issued by the Commission, and (B) each Preliminary Prospectus, if any, at the time of filing thereof, conformed in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder, and did 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; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information (as defined in Section 9(b) of this Agreement);

(c) For the purposes of this Agreement, the “Applicable Time” is 7:36 a.m., Eastern time, on the date of this Agreement. The Pricing Prospectus, as supplemented by the information listed on Schedule II(c) hereto, taken together (collectively, the “Pricing

Disclosure Package”), as of the Applicable Time, did not, and as of each Time of Delivery (as defined in Section 4(a) of this Agreement) (as supplemented by any post-effective amendment thereto) will not, include any 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, not misleading; and each Issuer Free Writing Prospectus and each Written Testing-the-Waters Communication, if any, does not conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus, and each Issuer Free Writing Prospectus, each broadly available road show and each Written Testing-the-Waters Communication, if any, as supplemented by and taken together with the Pricing Disclosure Package, as of the Applicable Time, did not, and as of each Time of Delivery (as supplemented by any post-effective amendment thereto) will not, include any 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, not misleading; provided, however, that this representation and warranty shall not apply to statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(d) The documents incorporated by reference in the Pricing Prospectus and the Prospectus, at the time when the Registration Statement was deemed to become effective and when such documents were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder, and none of such documents contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading; and no such documents were filed with the Commission since the Commission’s close of business on the business day immediately prior to the date of this Agreement and prior to the execution of this Agreement, except as set forth on Schedule II(b) hereto;

(e) The Registration Statement conforms, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Act and the rules and regulations of the Commission thereunder and do not and will not, as of the applicable effective date as to each part of the Registration Statement, as of the applicable filing date as to the Prospectus and any amendment or supplement thereto, and as of each Time of Delivery, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to any statements or omissions made in reliance upon and in conformity with the Underwriter Information;

(f) Neither the Company nor any of its subsidiaries has, since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus and the Prospectus, (i) sustained any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree or (ii) entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company and its subsidiaries, taken as a whole, or incurred any liability or obligation, direct or contingent, that is material to the Company and its subsidiaries, taken as a whole, in each case except as set forth or contemplated in the Pricing Prospectus and the Prospectus; and, since the respective dates as of which information is

given in the Registration Statement and the Pricing Prospectus and the Prospectus, there has not been (x) any change in the capital stock (other than as a result of (i) the exercise, if any, of stock options or the award, if any, of stock options or restricted stock in the ordinary course of business pursuant to the Company's equity plans that are described in the Pricing Prospectus and the Prospectus or (ii) the issuance, if any, of Stock upon conversion of Company securities as described in the Pricing Prospectus and the Prospectus) or long-term debt of the Company or any of its subsidiaries or (y) any Material Adverse Effect (as defined below); as used in this Agreement, "Material Adverse Effect" shall mean any material adverse change or effect, or any development involving a prospective material adverse change or effect, in or affecting (i) the business, properties, general affairs, management, financial position, stockholders' equity, results of operations or prospects of the Company and its subsidiaries, taken as a whole, except as set forth or contemplated in the Pricing Prospectus and the Prospectus, or (ii) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus;

(g) The Company and its subsidiaries do not own any real property and have good and marketable title to all personal property owned by them, in each case free and clear of all liens, encumbrances and defects except such as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings held under lease by the Company and its subsidiaries are held by them under valid, subsisting and enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries;

(h) Each of the Company and its subsidiaries has been (i) duly organized and is validly existing and in good standing under the laws of its jurisdiction of organization, with power and authority (corporate and other) to own and/or lease its properties and conduct its business as described in the Pricing Prospectus and the Prospectus, and (ii) duly qualified as a foreign corporation or other form of entity for the transaction of business and is in good standing under the laws of each other jurisdiction in which it owns or leases properties or conducts any business so as to require such qualification, except, in the case of this clause (ii), where the failure to be so qualified or in good standing would not, individually or in the aggregate, have a Material Adverse Effect, and each subsidiary of the Company has been listed in the Registration Statement;

(i) The Company has an authorized capitalization as set forth in the Pricing Prospectus and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and conform, in all material respects, to the description of the Stock contained in the Pricing Prospectus and Prospectus; and all of the issued shares of capital stock of the Company's subsidiaries have been duly and validly authorized and issued, are fully paid and non-assessable and (except, in the case of any foreign subsidiary, for directors' qualifying shares) are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims;

(j) The unissued Shares to be issued and sold by the Company to the Underwriters hereunder have been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued and fully paid and non-assessable and will conform in all material respects to the description of the Stock contained in the Pricing Disclosure Package and the Prospectus; and the issuance of the Shares is not subject to any preemptive or similar rights;

(k) The issue and sale of the Shares and the compliance by the Company with this Agreement and the consummation of the transactions contemplated in this Agreement, the Pricing Prospectus and the Prospectus will not conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, (A) any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject, (B) the certificate of incorporation or by-laws (or other applicable organizational document) of the Company or any of its subsidiaries, or (C) any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties, except, in the case of clauses (A) and (C), for such defaults, breaches, or violations as would not, individually or in the aggregate, have a Material Adverse Effect; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental agency or body is required for the issue and sale of the Shares or the consummation by the Company of the transactions contemplated by this Agreement, except such as have been obtained under the Act, the approval by the Financial Industry Regulatory Authority, Inc. ("FINRA") of the underwriting terms and arrangements and such consents, approvals, authorizations, registrations or qualifications as may be required under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the Underwriters;

(l) Neither the Company nor any of its subsidiaries is (i) in violation of its certificate of incorporation or by-laws (or other applicable organizational document), (ii) in violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body having jurisdiction over the Company or any of its subsidiaries or any of their properties, or (iii) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it or any of its properties may be bound, except, in the case of the foregoing clauses (ii) and (iii), for such violations or defaults as would not, individually or in the aggregate, have a Material Adverse Effect;

(m) The statements set forth in the Pricing Prospectus and Prospectus under the caption "Description of Capital Stock", insofar as they purport to constitute a summary of the terms of the Stock, under the caption "Material U.S. Federal Income Tax Consequences for Non-U.S. Holders," and under the caption "Underwriting," insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair in all material respects;

(n) Other than as set forth in the Pricing Prospectus, there are no legal, governmental or regulatory investigations, actions, demands, claims, suits, arbitrations, inquiries or proceedings ("Actions") pending to which the Company or any of its subsidiaries or, to the Company's knowledge, any officer or director of the Company, is a party or of which any property of the Company or any of its subsidiaries is the subject which, if

determined adversely to the Company or any of its subsidiaries (or such officer or director), would individually or in the aggregate have a Material Adverse Effect; and, to the Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or others; there are no current or pending Actions that are required under the Act to be described in the Registration Statement or the Pricing Prospectus that are not so described therein; and there are no statutes, regulations or contracts or other documents that are required under the Act to be filed as exhibits to the Registration Statement or described in the Registration Statement, the Pricing Prospectus that are not so filed as exhibits to the Registration Statement or described in the Registration Statement and the Pricing Prospectus;

(o) The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof, will not be an "investment company," as such term is defined in the Investment Company Act of 1940, as amended (the "Investment Company Act");

(p) (A) (i) At the time of filing the Registration Statement, (ii) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus), and (iii) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Act) made any offer relating to the Shares in reliance on the exemption of Rule 163 under the Act, if any, the Company was a "well-known seasoned issuer" as defined in Rule 405 under the Act; and (B) at the time of filing the Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) under the Act) of the Shares, and at the date hereof, the Company was not and is not an "ineligible issuer," as defined under Rule 405 under the Act;

(q) There are (and prior to the Time of Delivery, will be) no debt securities or preferred stock issued or guaranteed by the Company that are rated by a "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) under the Exchange Act;

(r) Deloitte & Touche LLP, which has certified certain financial statements of the Company and its subsidiaries, is an independent public accounting firm as required by the Act and the rules and regulations of the Commission thereunder;

(s) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that (i) complies with the requirements of the Exchange Act, (ii) has been designed by the Company's principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and (iii) is sufficient to provide reasonable assurance that (A) transactions are executed in accordance with management's general or specific authorization, (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets, (C) access to assets is permitted only in accordance with management's general or specific authorization, (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken

with respect to any differences and (E) the interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement, the Pricing Prospectus 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; and the Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting;

(t) Since the date of the latest audited financial statements included or incorporated by reference in the Pricing Prospectus and the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting;

(u) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective;

(v) This Agreement has been duly authorized, executed and delivered by the Company;

(w) Neither the Company nor any of its subsidiaries, nor any director or officer of the Company nor, to the Company's knowledge, any other employee of the Company or any of its subsidiaries, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries has (i) made, offered, promised or authorized any unlawful contribution, gift, entertainment or other unlawful expense (or taken any act in furtherance thereof); (ii) made, offered, promised or authorized any direct or indirect unlawful payment; or (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended, or the rules and regulations thereunder, the Bribery Act 2010 of the United Kingdom or any other applicable anti-corruption, anti-bribery or related law, statute or regulation (collectively, "Anti-Corruption Laws"); the Company and its subsidiaries have conducted their businesses in compliance with Anti-Corruption Laws and have instituted and maintained and will continue to maintain policies and procedures reasonably designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; neither the Company nor any of its subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of Anti-Corruption Laws;

(x) The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with the requirements of applicable anti-money laundering laws, including, but not limited to, the Bank Secrecy Act of 1970, as amended by the USA PATRIOT ACT of 2001, and the rules and regulations promulgated thereunder, and the anti-money laundering laws of the various jurisdictions in which the Company and its subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines issued, administered or enforced by any

governmental agency (collectively, the “Money Laundering Laws”) 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 knowledge of the Company, threatened;

(y) Neither the Company nor any of its subsidiaries, nor any director or officer of the Company nor, to the Company’s knowledge, any other employee of the Company or its subsidiary or any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries is (i) currently the subject or the target of any sanctions administered or enforced by the U.S. Government, including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury (“OFAC”), or the U.S. Department of State and including, without limitation, the designation as a “specially designated national” or “blocked person,” the European Union, His Majesty’s Treasury, the United Nations Security Council, or other relevant sanctions authority (collectively, “Sanctions”), (ii) located, organized, or resident in a country or territory that is the subject or target of Sanctions (a “Sanctioned Jurisdiction”), and the Company will not directly or indirectly use the proceeds of the offering of the Shares hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person, or in any country or territory, that, at the time of such funding, is the subject or the target of Sanctions or (ii) 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 Sanctions; neither the Company nor any of its subsidiaries is engaged in, or has, at any time in the past five years, engaged in, any dealings or transactions with or involving any individual or entity that was or is, as applicable, at the time of such dealing or transaction, the subject or target of Sanctions or with any Sanctioned Jurisdiction; the Company and its subsidiaries have instituted, and maintain, policies and procedures designed to promote and achieve continued compliance with Sanctions;

(z) The financial statements included or incorporated by reference in the Registration Statement, the Pricing Prospectus and the Prospectus, together with the related schedules and notes, present fairly in all material respects the financial position of the Company and its subsidiaries at the dates indicated and the statement of operations, stockholders’ equity and cash flows of the Company and its subsidiaries for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles (“GAAP”) applied on a consistent basis throughout the periods involved. The supporting schedules, if any, included or incorporated by reference in the Registration Statement, the Pricing Prospectus and the Prospectus, present fairly in accordance with GAAP, in all material respects, the information required to be stated therein. The interactive data in eXtensible Business Reporting Language included in the Registration Statement fairly presents the information called for in all material respects and has been reported in accordance with the Commission’s rules and guidelines. The selected financial data and the summary financial information included or incorporated by reference in the Registration Statement, the Pricing Prospectus and the Prospectus present fairly, in all material respects, the information shown therein and, other than non-GAAP measures, have been compiled on a basis consistent with that of the audited financial statements included therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included or incorporated by reference in the Registration Statement, the Pricing Prospectus or the Prospectus under the Act or the rules and regulations promulgated thereunder;

(aa) There are no persons with registration rights or other similar rights to have any securities registered pursuant to the Registration Statement or otherwise registered by the Company under the Act except as have been validly waived or complied with in connection with the offering of the Shares;

(bb) Except as would not reasonably be expected to have a Material Adverse Effect, no labor disturbance by or dispute with current or former employees or officers of the Company or any of its subsidiaries exists or, to the Company's knowledge, is contemplated or threatened, and the Company is not aware of any existing or imminent labor disturbance by, or dispute with, the employees of any of the Company's or any of its subsidiaries' principal suppliers, manufacturers or contractors. Neither the Company nor any of its subsidiaries is a party to any collective bargaining agreement;

(cc) The Company and its subsidiaries have insurance covering their respective properties, operations, personnel and business, including business interruption insurance, which insurance is in amounts and insures against such losses and risks as are reasonable and is ordinary and customary for comparable companies in the same or similar businesses; and neither the Company nor any of its subsidiaries has (i) not received notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance nor (ii) any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage at reasonable cost from similar insurers as may be reasonably necessary to continue its business;

(dd) The Company's board of directors meets the independence requirements of, and has established an audit committee, a compensation committee and a nominating and corporate governance committee, in each case, that meets the independence requirements of, the rules and regulations of the Commission and the Nasdaq Global Select Market (the "Exchange");

(ee) The Company and its subsidiaries, and to the Company's knowledge, their respective directors, officers and employees, are, and at all times have been, in compliance with applicable Health Care Laws (defined herein) including, but not limited to, the rules and regulations of the U.S. Food and Drug Administration ("FDA"), the U.S. Department of Health and Human Services Office of Inspector General, the Centers for Medicare & Medicaid Services, the Office for Civil Rights, and any other governmental agency or body having jurisdiction over the Company or any of its properties, and has not engaged in any activities which are, as applicable, cause for false claims liability, civil penalties, or mandatory or permissive exclusion from Medicare, Medicaid, or any other local, state or federal healthcare program, except for such noncompliance that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. For purposes of this Agreement, "Health Care Laws" shall mean, as applicable, the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)), the Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), the civil False Claims Act (31 U.S.C. §§ 3729 et seq.), the criminal False Claims Act (42 U.S.C. § 1320a-7b(a)), applicable criminal laws relating to health care fraud and abuse, the exclusion laws (42 U.S.C. § 1320a-7), the civil monetary penalties law (42 U.S.C. § 1320a-7a), the health care fraud criminal provisions under the Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. §§ 1320d et seq.) ("HIPAA"), the

exclusion laws (42 U.S.C. § 1320a-7), the civil monetary penalties law (42 U.S.C. § 1320a-7a), HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. §§ 17921 et seq.), the Federal Food, Drug, and Cosmetic Act (21 U.S.C. §§ 301 et seq.), the Patient Protection and Affordable Care Act of 2010 (Pub. Law 111-148), as amended by the Health Care and Education Reconciliation Act of 2010 (Pub. Law 111-152), and the regulations promulgated pursuant to the aforementioned statutes. Neither the Company nor any of its subsidiaries is a party to or has any ongoing reporting obligations pursuant to any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement imposed by any governmental authority. Neither the Company nor any of its subsidiaries has received any written notification, correspondence or any other written communication, including, without limitation, any Form FDA 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any similar regulatory authority, or any notification of any pending or, to the Company's knowledge, threatened claim, suit, proceeding, hearing, enforcement, investigation, arbitration or other action, from any governmental authority of alleging material non-compliance by, or material liability of, the Company or its subsidiaries under any Health Care Laws;

(ff) Each of the Company and its subsidiaries possesses, and is in material compliance with the terms of, all applications, certificates, approvals, clearances, registrations, exemptions, franchises, licenses, permits, consents and other authorizations issued by the appropriate Governmental Authorities and necessary to conduct their respective businesses (collectively, "Licenses"), including, without limitation, all Licenses required by the FDA, or any component thereof, and/or by any other U.S., state, local or foreign government or drug regulatory agency (collectively, the "Regulatory Agencies"), except where a failure to so possess or noncompliance would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. All such Licenses are in full force and effect and neither the Company nor any of its subsidiaries is in violation of any term or conditions of any such License, except where a failure to be in full force or effect or such violation would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Each of the Company and its subsidiaries has fulfilled and performed all of its respective obligations with respect to such Licenses and, no event has occurred which allows, or after notice or lapse of time would allow, revocation or termination thereof or results in any other impairment of the rights of the holder of any such License, except for such failure or occurrence that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received any notice of proceedings from the applicable Regulatory Agency proposing to revoke or materially adversely modify any such Licenses and, to the Company's knowledge, no Regulatory Agency has taken any action to limit, suspend or revoke any such License possessed by the Company;

(gg) To the Company's knowledge, the manufacturing facilities and operations of its suppliers are operated in compliance in all material respects with all applicable statutes, rules, regulations and policies of the Regulatory Agencies;

(hh) Other than as disclosed in the Registration Statement, the Pricing Prospectus and the Prospectus, none of the Company's product candidates has received marketing approval from any Regulatory Agencies. The pre-clinical studies and clinical trials that are described in the Registration Statement, the Pricing Prospectus and the Prospectus were

and, if still pending, are being, conducted in all material respects in accordance with the protocols submitted to the FDA or any foreign governmental body exercising comparable authority, and all applicable laws and regulations; the descriptions of the pre-clinical studies and clinical trials conducted by or, to the Company's knowledge, on behalf of the Company or by a licensor, and the results thereof, contained in the Registration Statement, the Pricing Prospectus and the Prospectus are accurate and complete in all material respects; the Company is not aware of any other pre-clinical studies or clinical trials, the results of which call into question the results described in the Registration Statement, the Pricing Prospectus and the Prospectus; and the Company has not received any notices or correspondence from the FDA, any foreign, state or local governmental body exercising comparable authority or any Institutional Review Board or ethics committee or similar body requiring the termination, suspension, material modification or clinical hold of any pre-clinical studies or clinical trials conducted by or, to the Company's knowledge, on behalf of the Company or by a licensor;

(ii) Neither the Company nor its subsidiaries, nor any of their respective officers, employees or directors, nor, to the Company's knowledge, any of its or their respective agents or clinical investigators, or licensors, has, for the past three (3) years, been excluded, suspended or debarred from participation in any U.S. federal or foreign health care program or human clinical research or, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion, or convicted of any crime or engaged in any conduct that would reasonably be expected to result in debarment under 21 U.S.C. § 335a or comparable foreign law;

(jj) The Company and each subsidiary owns or has valid and enforceable licenses or other rights to all patents and patent applications, copyrights, all material trademarks, trademark registrations, service marks, service mark registrations, trade names, service names and know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) and all other technology and intellectual property rights necessary for the conduct, or the proposed conduct, of the business of the Company in the manner described in the Pricing Prospectus and the Prospectus (collectively, the "Company Intellectual Property"); to the Company's knowledge, there are no rights of third parties to any of the patents, trademarks (other than which would, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole) and copyrights within the Company Intellectual Property disclosed in the Registration Statement and the Prospectus as being owned by the Company and its subsidiaries and such patents, trademark and copyrights are owned by the Company and its subsidiaries free and clear of all material liens, security interests, or encumbrances; to the Company's knowledge, the patents, material trademarks and copyrights held or licensed by the Company and its subsidiaries included within the Company Intellectual Property are valid, enforceable and subsisting; and other than as disclosed in the Pricing Prospectus and the Prospectus, (i) neither the Company nor its subsidiaries is obligated to pay a material royalty, grant a license, or provide other material consideration to any third party in connection with the Company Intellectual Property, (ii) no action, suit, claim or other proceeding is pending or, to the knowledge of the Company, is threatened, alleging that the conduct of the business of the Company in the manner described in the Pricing Prospectus and the Prospectus is infringing, misappropriating, diluting or otherwise violating any intellectual property rights of

others, (iii) no action, suit, claim or other proceeding is pending or, to the knowledge of the Company, is threatened, challenging the validity, enforceability, scope, registration, ownership or use of any of the Company Intellectual Property, (iv) no action, suit, claim or other proceeding is pending or, to the knowledge of the Company, is threatened, challenging the Company's and its subsidiaries' rights in or to any Company Intellectual Property, and the Company is unaware of any material facts which could form a reasonable basis for any such action, suit, proceeding or claim, (v) the Company has not received written notice of any claim of infringement, misappropriation or conflict with any asserted rights of others with respect to any of the Company's or its subsidiaries' products, proposed products, processes or Company Intellectual Property, (vi) to the knowledge of the Company, the development, manufacture, sale, and any currently proposed use of any of the products, proposed products or processes of the Company and its subsidiaries referred to in the Pricing Prospectus and the Prospectus, in the current or proposed conduct of the business of the Company, do not currently, and will not upon commercialization, to the knowledge of the Company, infringe any right or valid patent claim of any third party, (vii) to the Company's knowledge, no third party has any ownership right in or to any Company Intellectual Property in any field of use that is exclusively licensed to the Company or its subsidiaries, other than any licensor to the Company or its subsidiaries of such Company Intellectual Property, (viii) no employee, consultant or independent contractor of the Company or any of its subsidiaries is, to the Company's knowledge, in violation in any material respect 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 or independent contractor where the basis of such violation relates to such employee's employment or independent contractor's engagement with the Company or actions undertaken while employed or engaged with the Company, (ix) the Company has taken reasonable measures to protect its material confidential information and material trade secrets and to maintain and safeguard the material Company Intellectual Property, including the execution of appropriate nondisclosure and confidentiality agreements and (x) the Company has complied with the material terms of each agreement pursuant to which the Company Intellectual Property has been licensed to the Company, and any such agreements are in full force and effect;

(kk) All patents and patent applications owned by or licensed to the Company and its subsidiaries or under which the Company and its subsidiaries have rights have, to the knowledge of the Company, been duly and properly filed and maintained; to the knowledge of the Company, there are no material defects in any of the patents or patent applications disclosed in the Registration Statement and the Prospectus as being owned by the Company or its subsidiaries; to the knowledge of the Company, the parties prosecuting such applications have complied with their duty of candor and disclosure to the United States Patent and Trademark Office (the "USPTO") in connection with such applications; and the Company is not aware of any facts required to be disclosed to the USPTO that were not disclosed to the USPTO and which would preclude the grant of a patent in connection with any such application or could form the basis of a finding of invalidity with respect to any patents that have issued with respect to such applications;

(ll) Any statistical, industry-related and market-related data included in or incorporated by reference into each of the Registration Statement, the Pricing Prospectus and the Prospectus are based on or derived from sources that the Company reasonably believes to be reliable and accurate in all material respects;

(mm) The Company and its subsidiaries possess all licenses, certificates, permits and other authorizations issued by, and have made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities having jurisdiction over the Company and its subsidiaries that are necessary for the ownership or lease of their respective properties or the conduct of their respective businesses as described in the Registration Statement, the Pricing Prospectus and the Prospectus, except where the failure to possess or make the same would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and except as described in the Registration Statement, the Pricing Prospectus and the Prospectus, neither the Company nor any of its subsidiaries has received notice of any revocation or modification of any such license, certificate, permit or authorization, except where such revocation or modification would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect;

(nn) All United States federal income tax returns of the Company and its subsidiaries required by law to be filed have been filed and all taxes shown as due on such returns or that otherwise have been assessed, which are due and payable, have been paid, except assessments against which appeals have been or will be promptly taken and as to which adequate reserves have been provided. The Company and its subsidiaries have filed all other tax returns that are required to have been filed by them pursuant to applicable foreign, state, local or other law except insofar as the failure to file such returns would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, and has paid all taxes due pursuant to such returns or pursuant to any assessment received by the Company and its subsidiaries, except for such taxes, if any, as are being contested in good faith and as to which adequate reserves have been provided and except insofar as the failure to pay such taxes would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect;

(oo) The Company has not taken and will not take, directly or indirectly, any action that is designed to or that has constituted or might reasonably be expected to cause or result in stabilization or manipulation of the price of the Shares;

(pp) Neither the Company nor any of its subsidiaries is a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against the Company or any of its subsidiaries or any Underwriter for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Shares;

(qq) No relationship, direct or indirect, exists between or among the Company or any of its subsidiaries, on the one hand, and the directors, officers, stockholders, customers or suppliers of the Company or any of its subsidiaries, on the other, that is required by the Act to be described in the Registration Statement and the Prospectus and that is not so described in such documents and in the Registration Statement, the Pricing Prospectus and the Prospectus;

(rr) There are no contracts, arrangements or documents which are required to be described in the Registration Statement or to be filed as exhibits thereto which have not been so described and filed as required;

(ss) Except as would not reasonably be expected to have a Material Adverse Effect, (i) The Company's 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 are, to the knowledge of the Company, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants; (ii) the Company and its subsidiaries have implemented and maintained reasonable 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 all personal or personally identifiable data ("Personal Data")) used in connection with their businesses; to the knowledge of the Company, there have been no breaches, violations, outages or unauthorized uses of or accesses to any Personal Data, 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 compliance in all material respects 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;

(tt) The Company and each director and officer of the Company, in their capacities as such, are in compliance, to the extent required, with all provisions of the Sarbanes-Oxley Act of 2002, as amended, and all rules and regulations promulgated thereunder applicable, including Section 402 related to loans and Sections 302 and 906 related to certifications;

(uu) None of the subsidiaries of the Company is a "significant subsidiary" of the Company as such term is defined in Rule 1-02 of Regulation S-X under the Exchange Act;

(vv) No forward-looking statement (within the meaning of Section 27A of the Act and Section 21E of the Exchange Act) included in or incorporated by reference into any of the Registration Statement, the Pricing Prospectus or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith;

(ww) The Stock is registered pursuant to Section 12(b) of the Exchange Act and is listed for trading on the Exchange and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Stock under the Exchange Act or the delisting of the Stock from the Exchange, nor has the Company received any notification that the Commission or the Exchange is contemplating terminating such registration or listing. To the Company's knowledge, the Company is in compliance with all material applicable listing requirements of the Exchange;

(xx) The Company has paid the registration fee for this offering pursuant to Rule 456(b)(1) of the Act or will pay such fee within the time period required by such rule (without giving effect to the proviso therein) and in any event prior to the Closing Date.

2. Subject to the terms and conditions herein set forth, (a) the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at a purchase price per Firm Share of \$3.36, the number of Firm Shares set forth opposite the name of such Underwriter in Schedule I

hereto and (b) in the event and to the extent that the Underwriters shall exercise the election to purchase Optional Shares as provided below, the Company agrees to issue and sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at the purchase price per Firm Share set forth in clause (a) of this Section 2 (provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares), that portion of the number of Optional Shares as to which such election shall have been exercised (to be adjusted by you so as to eliminate fractional shares) determined by multiplying such number of Optional Shares by a fraction, the numerator of which is the maximum number of Optional Shares which such Underwriter is entitled to purchase as set forth opposite the name of such Underwriter in Schedule I hereto and the denominator of which is the maximum number of Optional Shares that all of the Underwriters are entitled to purchase hereunder.

The Company hereby grants to the Underwriters the right to purchase at their election up to 2,571,428 Optional Shares, at the purchase price per share set forth in the paragraph above, provided that the purchase price per Optional Share shall be reduced by an amount per share equal to any dividends or distributions declared by the Company and payable on the Firm Shares but not payable on the Optional Shares. Any such election to purchase Optional Shares may be exercised only by written notice from you to the Company, given within a period of 30 calendar days after the date of this Agreement, setting forth the aggregate number of Optional Shares to be purchased and the date on which such Optional Shares are to be delivered, as determined by you but in no event earlier than the First Time of Delivery (as defined in Section 4 hereof) or, unless you and the Company otherwise agree in writing, earlier than two or later than ten business days after the date of such notice.

3. Upon the authorization by you of the release of the Firm Shares, the several Underwriters propose to offer the Firm Shares for sale upon the terms and conditions set forth in the Pricing Disclosure Package and the Prospectus.

4. (a) The Shares to be purchased by each Underwriter hereunder, in definitive or book-entry form, and in such authorized denominations and registered in such names as the Representative may request upon at least twenty-four hours' prior notice to the Company shall be delivered by or on behalf of the Company to the Representative, through the facilities of the Depository Trust Company ("DTC"), for the account of such Underwriter, against payment by or on behalf of such Underwriter of the purchase price therefor by wire transfer of Federal (same-day) funds to the account specified by the Company to the Representative at least twenty-four hours in advance. The Company will cause the certificates, if any, representing the Shares to be made available for checking and packaging at least twenty-four hours prior to the Time of Delivery (as defined below) with respect thereto at the office of DTC or its designated custodian (the "Designated Office"). The time and date of such delivery and payment shall be, with respect to the Firm Shares, 9:30 a.m., New York City time, on January 13, 2025 or such other time and date as the Representative and the Company may agree upon in writing, and, with respect to the Optional Shares, 9:30a.m., New York time, on the date specified by the Representative in the written notice given by the Representative of the Underwriters' election to purchase such Optional Shares, or such other time and date as the Representative and the Company

may agree upon in writing. Such time and date for delivery of the Firm Shares is herein called the “First Time of Delivery”, such time and date for delivery of the Optional Shares, if not the First Time of Delivery, is herein called the “Second Time of Delivery,” and each such time and date for delivery is herein called a “Time of Delivery”.

(b) The documents to be delivered at each Time of Delivery by or on behalf of the parties hereto pursuant to Section 8 hereof, including the cross receipt for the Shares and any additional documents requested by the Underwriters pursuant to Section 8(k) hereof, will be delivered at the offices of Wilmer Cutler Hale Pickering and Dorr LLP, 7 World Trade Center 250 Greenwich Street New York, NY 10007 (the “Closing Location”), and the Shares will be delivered at the Designated Office, all at such Time of Delivery. A meeting will be held at the Closing Location at 5:00 p.m., New York City time, on the New York Business Day next preceding such Time of Delivery, at which meeting the final drafts of the documents to be delivered pursuant to the preceding sentence will be available for review by the parties hereto. For the purposes of this Section 4, “New York Business Day” shall mean each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which banking institutions in New York City are generally authorized or obligated by law or executive order to close.

5. The Company agrees with each of the Underwriters:

(a) To prepare the Prospectus in a form approved by you and to file such Prospectus pursuant to Rule 424(b) under the Act not later than the Commission’s close of business on the second business day following the execution and delivery of this Agreement or such earlier time as may be required under the Act; to make no further amendment or any supplement to the Registration Statement, the Base Prospectus or the Prospectus prior to the last Time of Delivery which shall be disapproved by you promptly after reasonable notice thereof; to advise you, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any amendment or supplement to the Prospectus has been filed and to furnish you with copies thereof; to file promptly all material required to be filed by the Company with the Commission pursuant to Rule 433(d) under the Act; to file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required in connection with the offering or sale of the Shares; to advise you, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus in respect of the Shares, of any notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act, of the suspension of the qualification of the Shares for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose or pursuant to Section 8A of the Act, or of any request by the Commission for the amending or supplementing of the Registration Statement or the Prospectus or for additional information; and, in the event of the issuance of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus or other prospectus or suspending any such qualification, to promptly use its best efforts to obtain the withdrawal of such order; and in the event of any such issuance of a notice of objection, promptly to take such steps

including, without limitation, amendment the Registration Statement or filing a new registration statement, at its own expense, as may be necessary to permit offers and sales of the Shares by the Underwriters (references herein to the Registration Statement shall include any such amendment or new registration statement);

(b) If by the third anniversary (the “Renewal Deadline”) of the initial effective date of the Registration Statement, any of the Shares remain unsold by the Underwriters, the Company will file, if it has not already done so and is eligible to do so, a new automatic shelf registration statement relating to the Shares, in a form satisfactory to you. If at the Renewal Deadline the Company is no longer eligible to file an automatic shelf registration statement, the Company will, if it has not already done so, file a new shelf registration statement relating to the Shares, in a form satisfactory to you and will use its best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Deadline. The Company will take all other action necessary or appropriate to permit the public offering and sale of the Shares to continue as contemplated in the expired registration statement relating to the Shares. References herein to the Registration Statement shall include such new automatic shelf registration statement or such new shelf registration statement, as the case may be.

(c) If required by Rule 430B(h) under the Act, to prepare a form of prospectus in a form approved by you and to file such form of prospectus pursuant to Rule 424(b) under the Act not later than may be required by Rule 424(b) under the Act; and to make no further amendment or supplement to such form of prospectus which shall be disapproved by you promptly after reasonable notice thereof;

(d) Prior to 10:00 a.m., New York City time, on the New York Business Day next succeeding the date of this Agreement (or such other time as may be agreed to by the Representative and the Company) and from time to time, to furnish the Underwriters with written and electronic copies of the Prospectus, Preliminary Prospectus and any supplements and amendments thereto or to the Registration Statement (to the extent not previously delivered) in such quantities as the Representative may reasonably request, and, if the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is required at any time prior to the expiration of nine months after the time of issue of the Prospectus in connection with the offering or sale of the Shares and if at such time any event shall have 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 (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) is delivered, not misleading, or, if for any other reason it shall be 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 Pricing Prospectus and the Prospectus in order to comply with the Act or the Exchange Act, to notify you and, before amending or supplementing the Registration Statement, the Pricing Prospectus or the Prospectus, to furnish you a copy of each such proposed amendment or supplement and not file any such proposed amendment or supplement to which you reasonably object, and upon your request to prepare and furnish without charge to each Underwriter and to any dealer in securities (whose name and address the Underwriters shall furnish to the Company) as many written and electronic copies as you may from time to time reasonably request of an amended Prospectus or a supplement to

the Prospectus which will correct such statement or omission or effect such compliance; and in case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) under the Act) in connection with sales of any of the Shares at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many written and electronic copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Act;

(e) To make generally available to its securityholders as soon as practicable (which may be satisfied by filing with the Commission's Electronic Data Gathering, Analysis and Retrieval System ("EDGAR") or any successor thereto), but in any event not later than sixteen months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Act and the rules and regulations of the Commission thereunder (including, at the option of the Company, Rule 158);

(f) During the period beginning from the date hereof and continuing to and including the date 60 days after the date of the Prospectus (the "Lock-Up Period"), not to (i) offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, or file with or confidentially submit to the Commission a registration statement under the Act relating to, any securities of the Company that are substantially similar to the Shares, including but not limited to any options or warrants to purchase shares of Stock or any securities that are convertible into or exchangeable for, or that represent the right to receive, Stock or any such substantially similar securities, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Stock or such other securities, in cash or otherwise (other than the Shares to be sold hereunder or pursuant to employee stock option plans existing on, or upon the conversion or exchange of convertible or exchangeable securities outstanding as of, the date of this Agreement), without the prior written consent of the Representative; *provided*, that the restrictions contained in this paragraph shall not apply to (a) the Shares to be sold by the Company hereunder, (b) the issuance by the Company of shares of Stock or any other security pursuant to the exercise of an option or warrant or the conversion and/or exchange of a security in each case outstanding on the date hereof and described in the Registration Statement and the Prospectus, (c) grants of options, restricted shares or restricted share units to officers, directors, employees and consultants of the Company in accordance with the terms of an incentive compensation plan described in the Registration Statement and the Prospectus, or the issuance by the Company of shares of Common Stock upon the exercise thereof, (d) the filing by the Company of a registration statement with the Commission on Form S-8 in connection with such aforesaid plan, or (e) the issuance of shares of Stock, or any securities convertible into or exercisable or exchangeable for shares of Stock, or the entry into an agreement to issue shares of Stock, in each case in connection with any bona fide merger, joint venture, strategic alliance, commercial or other collaborative transaction, or the acquisition or license by the Company of the business, property, technology or other assets of another individual or entity that is an unaffiliated third party of the Company, or the assumption of an employee benefit plan in connection with such a merger or acquisition, provided, that the aggregate number of

shares of Stock or securities convertible into or exercisable for Stock (on an as-converted or as exercised basis, as the case may be) that the Company may sell or issue or agree to sell or issue pursuant to clause (e) above shall not exceed 5% of the total number of shares of the Company's Stock issued and outstanding immediately following the completion of the transactions contemplated by this Agreement and with respect to any transaction described in clause (e) of this Section 5(f) occurring during the Lock-Up Period, any transferee or other recipient of Stock or other Company securities agrees to be bound in writing, until the end of the Lock-Up Period, by the restrictions set forth in a lock-up letter in the form described in Section 8(h) hereof; and

(g) During a period of three (3) years from the effective date of the Registration Statement, for so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to its stockholders as soon as practicable after the end of each fiscal year an annual report (including a balance sheet and statements of income, stockholders' equity and cash flows of the Company and its consolidated subsidiaries certified by independent public accountants) and, as soon as practicable after the end of each of the first three quarters of each fiscal year (beginning with the fiscal quarter ending after the effective date of the Registration Statement), to make available to its stockholders consolidated summary financial information of the Company and its subsidiaries for such quarter in reasonable detail, provided, that no reports, documents or other information needs to be furnished pursuant to this Section 5(g) to the extent they are available on EDGAR;

(h) During a period of three (3) years from the effective date of the Registration Statement, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act, to furnish to you copies of all reports or other communications (financial or other) furnished to stockholders, and to deliver to you (i) as soon as they are available, copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange on which any class of securities of the Company is listed; and (ii) such additional information concerning the business and financial condition of the Company as you may from time to time reasonably request (such financial statements to be on a consolidated basis to the extent the accounts of the Company and its subsidiaries are consolidated in reports furnished to its stockholders generally or to the Commission), provided, that no reports, documents or other information needs to be furnished pursuant to this Section 5(g) to the extent they are available on EDGAR;

(h) To use the net proceeds received by it from the sale of the Shares pursuant to this Agreement in the manner specified in the Pricing Prospectus under the caption "Use of Proceeds";

(i) To use its best efforts to list, subject to notice of issuance, the Shares on the Exchange;

(j) To pay the required Commission filing fees relating to the Shares within the time required by Rule 456(b)(1) under the Act without regard to the proviso therein and otherwise in accordance with Rules 456(b) and 457(r) under the Act;

(k) Upon request of any Underwriter, to furnish, or cause to be furnished, to such Underwriter an electronic version of the Company's trademarks, servicemarks and corporate logo for use on the website, if any, operated by such Underwriter for the purpose

of facilitating the on-line offering of the Shares (the "License"); provided, however, that the License shall be used solely for the purpose described above, is granted without any fee and may not be assigned or transferred; and

6. (a) The Company represents and agrees that, without the prior consent of the Representative, it has not made and will not make any offer relating to the Shares that would constitute a "free writing prospectus" as defined in Rule 405 under the Act; each Underwriter represents and agrees that, without the prior consent of the Company and the Representative, it has not made and will not make any offer relating to the Shares that would constitute a free writing prospectus required to be filed with the Commission; any such free writing prospectus the use of which has been consented to by the Company and the Representative is listed on Schedule II(a) hereto;

(b) The Company has complied and will comply with the requirements of Rule 433 under the Act applicable to any Issuer Free Writing Prospectus, including timely filing with the Commission or retention where required and legending; and the Company represents that it has satisfied and agrees that it will satisfy the conditions under Rule 433 under the Act to avoid a requirement to file with the Commission any electronic road show;

(c) The Company agrees that if at any time following issuance of an Issuer Free Writing Prospectus or Written Testing-the-Waters Communication any event occurred or occurs as a result of which such Issuer Free Writing Prospectus or Written Testing-the-Waters Communication would conflict with the information in the Registration Statement, the Pricing Disclosure Package or the Prospectus or 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 then prevailing, not misleading, the Company will give prompt notice thereof to the Representative and, if requested by the Representative, will prepare and furnish without charge to each Underwriter an Issuer Free Writing Prospectus, Written Testing-the-Waters Communication or other document which will correct such conflict, statement or omission;

(d) The Company represents and agrees that (i) it has not engaged in, or authorized any other person to engage in, any Testing-the-Waters Communications, other than Testing-the-Waters Communications with the prior consent of the Representative with entities that the Company reasonably believes are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Act; and (ii) it has not distributed, or authorized any other person to distribute, any Written Testing-the-Waters Communications, other than those distributed with the prior consent of the Representative that are listed on Schedule II(d) hereto; and the Company reconfirms that the Underwriters have been authorized to act on its behalf in engaging in Testing-the-Waters Communications;

(e) Each Underwriter represents and agrees that any Testing-the-Waters Communications undertaken by it were with entities that such Underwriter reasonably believes are qualified institutional buyers as defined in Rule 144A under the Act or institutions that are accredited investors as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Act.

7. The Company covenants and agrees with the several Underwriters that the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Shares under the Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, the Base Prospectus, any Preliminary Prospectus, any Written Testing-the-Waters Communication, any Issuer Free Writing Prospectus and the Prospectus and amendments and supplements thereto and the mailing and delivering of copies thereof to the Underwriters and dealers; (ii) the cost of printing or producing any Agreement among Underwriters, this Agreement, the Blue Sky Memorandum, closing documents (including any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Shares; (iii) all expenses in connection with the qualification of the Shares for offering and sale under state securities laws as provided in Section 5(b) hereof, including the reasonable fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky survey (iv) 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 and officers of the Company and any such consultants, and 50% of the cost of any aircraft chartered in connection with the road show; (v) all fees and expenses in connection with listing the Shares on the Exchange; (vi) the filing fees incident to, and the reasonable fees and disbursements of counsel for the Underwriters in connection with, any required review by FINRA of the terms of the sale of the Shares; (vii) the cost of preparing stock certificates; (viii) the cost and charges of any transfer agent, warrant agent or registrar; and (ix) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise specifically provided for in this Section; provided that the aggregate amount of fees of counsel payable by the Company pursuant to subsections (iii) and, solely with respect to fees and disbursements for underwriters' counsel, subsection (vi), shall not exceed \$25,000 in the aggregate. It is understood, however, that, except as provided in this Section, and Sections 9 and 12 hereof, the Underwriters will pay all of their own costs and expenses, including the fees of their counsel, stock transfer taxes on resale of any of the Shares by them, and any advertising expenses connected with any offers they may make and the travel and lodging expenses incurred by representatives of the Underwriters in connection with any road show.

8. The obligations of the Underwriters hereunder, as to the Shares to be delivered at each Time of Delivery, shall be subject, in their discretion, to the condition that all representations and warranties and other statements of the Company herein are, at and as of the Applicable Time and such Time of Delivery, true and correct, the condition that the Company shall have performed all of its obligations hereunder theretofore to be performed, and the following additional conditions:

(a) The Prospectus shall have been filed with the Commission pursuant to Rule 424(b) under the Act within the applicable time period prescribed for such filing by the rules and regulations under the Act and in accordance with Section 5(a) hereof; all material required to be filed by the Company pursuant to Rule 433(d) under the Act shall have been filed with the Commission within the applicable time period prescribed for such filing by Rule 433; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose or pursuant to Section 8A of the Act shall have been initiated or threatened by the Commission and no notice of objection of the Commission to the use of the Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Act shall have been received; no stop order suspending or preventing the use of the Pricing Prospectus, Prospectus or any Issuer Free Writing Prospectus shall have been initiated or threatened by the Commission; and all requests for additional information on the part of the Commission shall have been complied with to your reasonable satisfaction;

(b) Wilmer Cutler Pickering Hale and Dorr LLP, counsel for the Underwriters, shall have furnished to you their written opinion and negative assurance letter, each dated such Time of Delivery, in form and substance satisfactory to the Representative, and such counsel shall have received such papers and information as they may reasonably request to enable them to pass upon such matters;

(c) (i) Goodwin Procter LLP, counsel for the Company, shall have furnished to you their written opinion and negative assurance letter, each dated such Time of Delivery, in form and substance satisfactory to the Representative, and (ii) Fish & Richardson, intellectual property counsel for the Company, shall have furnished to you their written opinion and negative assurance letter, each dated such Time of Delivery, in form and substance satisfactory to the Representative;

(d) On the date of the Prospectus at a time prior to the execution of this Agreement, at 9:30 a.m., New York City time, on the effective date of any post-effective amendment to the Registration Statement filed subsequent to the date of this Agreement and also at each Time of Delivery, Deloitte & Touche LLP shall have furnished to you a letter or letters, dated the respective dates of delivery thereof, in form and substance satisfactory to the Representative;

(e) (i) Neither the Company nor any of its subsidiaries shall have sustained since the date of the latest audited financial statements included in or incorporated by reference into the Pricing Prospectus any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the Pricing Prospectus, and (ii) since the respective dates as of which information is given in the Pricing Prospectus there shall not have been any change in the capital stock or long-term debt of the Company or any of its subsidiaries or any change or effect, or any development involving a prospective change or effect, in or affecting (x) the business, properties, general affairs, management, financial position, stockholders' equity or results of

operations of the Company and its subsidiaries, taken as a whole, except as set forth or contemplated in the Pricing Prospectus, or (y) the ability of the Company to perform its obligations under this Agreement, including the issuance and sale of the Shares, or to consummate the transactions contemplated in the Pricing Prospectus and the Prospectus, the effect of which, in any such case described in clause (i) or (ii), is in your judgment so material and adverse as to make it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(f) On or after the Applicable Time there shall not have occurred any of the following: (i) a suspension or material limitation in trading in securities generally on the Exchange; (ii) a suspension or material limitation in trading in the Company's securities on the Exchange; (iii) a general moratorium on commercial banking activities declared by either Federal or New York State authorities or a material disruption in commercial banking or securities settlement or clearance services in the United States; (iv) the outbreak or escalation of hostilities involving the United States or the declaration by the United States of a national emergency or war or (v) the occurrence of any other calamity or crisis or any change in financial, political or economic conditions in the United States or elsewhere, if the effect of any such event specified in clause (iv) or (v) in your judgment makes it impracticable or inadvisable to proceed with the public offering or the delivery of the Shares being delivered at such Time of Delivery on the terms and in the manner contemplated in the Pricing Prospectus and the Prospectus;

(g) The Shares to be sold at such Time of Delivery shall have been duly listed on the Exchange;

(h) The Company shall have obtained and delivered to the Underwriters executed copies of an agreement from officers and directors, substantially in the form attached as Annex I hereto;

(i) The Company shall have complied with the provisions of Section 5(c) hereof with respect to the furnishing of prospectuses on the New York Business Day next succeeding the date of this Agreement (or such other time as may be agreed to by you and the Company); and

(j) The Company shall have furnished or caused to be furnished to you at such Time of Delivery certificates of officers of the Company satisfactory to you as to the accuracy of the representations and warranties of the Company herein at and as of such Time of Delivery, as to the performance by the Company of all of its obligations hereunder to be performed at or prior to such Time of Delivery, as to the matters set forth in subsections (a) and (e) of this Section and as to such other matters as you may reasonably request.

9. (a) The Company will indemnify and hold harmless each Underwriter against any losses, claims, damages or liabilities, joint or several, to which such Underwriter may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus,

or any amendment or supplement thereto, any Issuer Free Writing Prospectus, any “roadshow” as defined in Rule 433(h) under the Act (a “roadshow”), any “issuer information” filed or required to be filed pursuant to Rule 433(d) under the Act or any Testing-the-Waters Communication, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and will reimburse each Underwriter for any documented legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred; *provided, however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus or any Testing-the-Waters Communication, in reliance upon and in conformity with the Underwriter Information.

(b) Each Underwriter, severally and not jointly, will indemnify and hold harmless the Company against any losses, claims, damages or liabilities to which the Company may become subject, under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Testing-the-Waters Communication, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, the Base Prospectus, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, or any roadshow or any Testing-the-Waters Communication, in reliance upon and in conformity with the Underwriter Information; and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with investigating or defending any such action or claim as such expenses are incurred. As used in this Agreement with respect to an Underwriter and an applicable document, “Underwriter Information” shall mean the written information furnished to the Company by such Underwriter through the Representative expressly for use therein; it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the sixth paragraph and the twelfth paragraph under the caption “Underwriting” and the statement regarding the prior business dealings between the Company and the Underwriters appearing in the second sentence of the seventeenth paragraph under the caption “Underwriting”.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) of this Section 9 of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; provided that the failure to notify the indemnifying party shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 9 except to the extent that it has

been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided further that the failure to notify the indemnifying party shall not relieve it from any liability that it may have to an indemnified party otherwise than under the preceding paragraphs of this Section 9. In case any such action shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party (who shall not, except with the consent of the indemnified party, be counsel to the indemnifying party), and, after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal expenses of other counsel or any other expenses, in each case subsequently incurred by such indemnified party, in connection with the defense thereof other than reasonable costs of investigation. No indemnifying party shall, without the written consent of the indemnified party, effect the settlement or compromise of, or consent to the entry of any judgment with respect to, any pending or threatened action or claim in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified party is an actual or potential party to such action or claim) unless such settlement, compromise or judgment (i) includes an unconditional release of the indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 9 is unavailable to or insufficient to hold harmless an indemnified party under subsection (a) or (b) above in respect of any losses, claims, damages or liabilities (or actions in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Shares. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law, then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this subsection (d) were

determined by *pro rata* allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to above in this subsection (d) shall be deemed to include any documented legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) The obligations of the Company under this Section 9 shall be in addition to any liability which the Company may otherwise have and shall extend, upon the same terms and conditions, to each employee, officer and director of each Underwriter and each person, if any, who controls any Underwriter within the meaning of the Act and each broker-dealer or other affiliate of any Underwriter; and the obligations of the Underwriters under this Section 9 shall be in addition to any liability which the respective Underwriters may otherwise have and shall extend, upon the same terms and conditions, to each officer and director of the Company and to each person, if any, who controls the Company within the meaning of the Act.

10. (a) If any Underwriter shall default in its obligation to purchase the Shares which it has agreed to purchase hereunder at a Time of Delivery, you may in your discretion arrange for you or another party or other parties to purchase such Shares on the terms contained herein. If within thirty-six hours after such default by any Underwriter you do not arrange for the purchase of such Shares, then the Company shall be entitled to a further period of thirty-six hours within which to procure another party or other parties satisfactory to you to purchase such Shares on such terms. In the event that, within the respective prescribed periods, you notify the Company that you have so arranged for the purchase of such Shares, or the Company notifies you that it has so arranged for the purchase of such Shares, you or the Company shall have the right to postpone such Time of Delivery for a period of not more than seven days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees to file promptly any amendments or supplements to the Registration Statement or the Prospectus which in your opinion may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any person substituted under this Section with like effect as if such person had originally been a party to this Agreement with respect to such Shares.

(b) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased does not exceed one-eleventh of the aggregate number of all the Shares to be purchased at such

Time of Delivery, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of shares which such Underwriter agreed to purchase hereunder at such Time of Delivery and, in addition, to require each non-defaulting Underwriter to purchase its pro rata share (based on the number of Shares which such Underwriter agreed to purchase hereunder) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

(c) If, after giving effect to any arrangements for the purchase of the Shares of a defaulting Underwriter or Underwriters by you and the Company as provided in subsection (a) above, the aggregate number of such Shares which remains unpurchased exceeds one-eleventh of the aggregate number of all the Shares to be purchased at such Time of Delivery, or if the Company shall not exercise the right described in subsection (b) above to require non-defaulting Underwriters to purchase Shares of a defaulting Underwriter or Underwriters, then this Agreement (or, with respect to the Second Time of Delivery, the obligations of the Underwriters to purchase and of the Company to sell the Optional Shares) shall thereupon terminate, without liability on the part of any non-defaulting Underwriter or the Company, except for the expenses to be borne by the Company and the Underwriters as provided in Section 7 hereof and the indemnity and contribution agreements in Section 9 hereof; but nothing herein shall relieve a defaulting Underwriter from liability for its default.

11. The respective indemnities, rights of contribution, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by or on behalf of them, respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation (or any statement as to the results thereof) made by or on behalf of any Underwriter or any director, officer, employee, affiliate or controlling person of any Underwriter, or the Company, or any officer or director or controlling person of the Company, and shall survive delivery of and payment for the Shares.

12. If this Agreement shall be terminated pursuant to Section 10 hereof, the Company shall not then be under any liability to any Underwriter except as provided in Sections 7 and 9 hereof; but, if for any other reason, any Shares are not delivered by or on behalf of the Company as provided herein or the Underwriters decline to purchase the Shares for any reason permitted under this Agreement, the Company will reimburse the Underwriters through you for all out-of-pocket expenses approved in writing by you, including fees and disbursements of counsel, reasonably incurred and documented by the Underwriters in making preparations for the purchase, sale and delivery of the Shares not so delivered, but the Company shall then be under no further liability to any Underwriter except as provided in Sections 7 and 9 hereof.

13. In all dealings hereunder, the Representative shall act on behalf of each of the Underwriters, and the parties hereto shall be entitled to act and rely upon any statement, request, notice or agreement on behalf of any Underwriter made or given by Leerink Partners LLC on behalf of you as the Representative.

All statements, requests, notices and agreements hereunder shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the Representative in care of Leerink Partners LLC, 1301 Avenue of the Americas, 5th Floor New York, New York 10019, Attention: Stuart R. Nayman; and if to the Company

shall be delivered or sent by mail, telex or facsimile transmission to the address of the Company set forth in the Registration Statement, Attention: Co-Chief Executive Officers, with a copy (which shall not constitute notice) to Goodwin Procter LLP, 100 Northern Avenue, Boston, MA 02210, Attention: Benjamin K. Marsh & Marishka DeToy; provided, however, that any notice to an Underwriter pursuant to Section 9(c) hereof shall be delivered or sent by mail, telex or facsimile transmission to such Underwriter at its address set forth in its Underwriters' Questionnaire, or telex constituting such Questionnaire, which address will be supplied to the Company by you upon request; provided, however, that notices under subsection 5(e) shall be in writing, and if to the Underwriters shall be delivered or sent by mail, telex or facsimile transmission to you as the Representative at in care of Leerink Partners LLC, 1301 Avenue of the Americas, 5th Floor New York, New York 10019, Attention: Stuart R. Nayman. Any such statements, requests, notices or agreements shall take effect upon receipt thereof.

In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

14. This Agreement shall be binding upon, and inure solely to the benefit of, the Underwriters, the Company and, to the extent provided in Sections 9 and 11 hereof, the officers and directors of the Company and each person who controls the Company or any Underwriter, or any director, officer, employee, or affiliate of any Underwriter, and their respective heirs, executors, administrators, successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. No purchaser of any of the Shares from any Underwriter shall be deemed a successor or assign by reason merely of such purchase.

15. Time shall be of the essence of this Agreement. As used herein, the term "business day" shall mean any day when the Commission's office in Washington, D.C. is open for business.

16. The Company acknowledges and agrees that (i) the purchase and sale of the Shares pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other, (ii) in connection therewith and with the process leading to such transaction each Underwriter is acting solely as a principal and not the agent or fiduciary of the Company, (iii) no Underwriter has assumed an advisory or fiduciary responsibility in favor of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) or any other obligation to the Company except the obligations expressly set forth in this Agreement, (iv) the Company has consulted its own legal and financial advisors to the extent it deemed appropriate, and (v) none of the activities of the Underwriters in connection with the transactions contemplated herein constitutes a recommendation, investment advice, or solicitation of any action by the Underwriters with respect to any entity or natural person. The Company agrees that it will not claim that the Underwriters, or any of them, has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

17. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

18. This Agreement and any transaction contemplated by this Agreement and any claim, controversy or dispute arising under or related thereto shall be governed by and construed in accordance with the laws of the State of New York without regard to principles of conflict of laws that would result in the application of any other law than the laws of the State of New York. The Company agrees that any suit or proceeding arising in respect of this Agreement or any transaction contemplated by this Agreement will be tried exclusively in the U.S. District Court for the Southern District of New York or, if that court does not have subject matter jurisdiction, in any state court located in The City and County of New York and the Company agrees to submit to the jurisdiction of, and to venue in, such courts.

19. The Company and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

20. This Agreement may be executed by any one or more of the parties hereto in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

21. Notwithstanding anything herein to the contrary, the Company is authorized to disclose to any persons the U.S. federal and state income tax treatment and tax structure of the potential transaction and all materials of any kind (including tax opinions and other tax analyses) provided to the Company relating to that treatment and structure, without the Underwriters imposing any limitation of any kind. However, any information relating to the tax treatment and tax structure shall remain confidential (and the foregoing sentence shall not apply) to the extent necessary to enable any person to comply with securities laws. For this purpose, "tax structure" is limited to any facts that may be relevant to that treatment.

22. Recognition of the U.S. Special Resolution Regimes.

(a) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

(c) As used in this section:

“BHC Act Affiliate” has the meaning assigned to the term “affiliate” in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k).

“Covered Entity” means any of the following:

(i) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b);

(ii) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or

(iii) a “covered FSI” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

“Default Right” has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

“U.S. Special Resolution Regime” means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

If the foregoing is in accordance with your understanding, please sign and return to us counterparts hereof, and upon the acceptance hereof by you, on behalf of each of the Underwriters, this letter and such acceptance hereof shall constitute a binding agreement between each of the Underwriters and the Company. It is understood that your acceptance of this letter on behalf of each of the Underwriters is pursuant to the authority set forth in a form of Agreement among Underwriters, the form of which shall be submitted to the Company for examination upon request, but without warranty on your part as to the authority of the signers thereof.

[Signature Page Follows]

Very truly yours,

Amylyx Pharmaceuticals, Inc.

By: /s/ Joshua Cohen

Name: Joshua Cohen

Title: Co-Chief Executive Officer

Accepted as of the date hereof:

Leerink Partners LLC

By: /s/ Jon A Civitarese

Name: Jon A Civitarese

Title: Senior Managing Director

On behalf of each of the Underwriters

[Signature Page to Underwriting Agreement]

<u>Underwriter</u>	<u>Total Number of Firm Shares to be Purchased</u>	<u>Number of Optional Shares to be Purchased if Maximum Option Exercised</u>
Leerink Partners LLC	17,142,857	2,571,428
Total	17,142,857	2,571,428

SCHEDULE II

(a) Issuer Free Writing Prospectuses not included in the Pricing Disclosure Package:

None

(b) Additional Documents Incorporated by Reference:

None.

(c) Information other than the Pricing Prospectus that comprise the Pricing Disclosure Package:

The public offering price per share for the Shares is \$3.50.

The number of Firm Shares purchased by the Underwriters is 17,142,857.

The number of Optional Shares potentially to be sold by the Company is up to 2,571,428.

(d) Written Testing-the-Waters Communications:

None.



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620 Eighth Avenue
New York, NY 10018

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+1 212 813 8800

January 10, 2025

Amylyx Pharmaceuticals, Inc.
43 Thorndike St.
Cambridge, Massachusetts 02141

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 (File No. 333-270505) (as amended or supplemented, the "Registration Statement") filed on March 13, 2023 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 offer by Amylyx Pharmaceuticals, Inc., a Delaware corporation (the "Company"), of any combination of securities of the types specified therein. Reference is made to our opinion letter dated March 13, 2023 and included as Exhibit 5.1 to the Registration Statement.

We are delivering this supplemental opinion letter in connection with the prospectus supplement (the "Prospectus Supplement") filed on January 10, 2025 by the Company with the Commission pursuant to Rule 424 under the Securities Act. The Prospectus Supplement relates to the offering by the Company of up to 19,714,285 shares (the "Shares") of the Company's common stock, par value \$0.0001 per share (the "Common Stock") covered by the Registration Statement. The Shares include an over-allotment option granted to the underwriter of the offering to purchase 2,571,428 Shares. The Shares are being sold to the underwriter named in, and pursuant to, an underwriting agreement between the Company and such underwriter (the "Underwriting Agreement").

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.

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, when delivered and paid for in accordance with the terms of the Underwriting Agreement, will be validly issued, fully paid and non-assessable.

This opinion letter and the opinion 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