

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

Amylyx Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2834
(Primary Standard Industrial
Classification Code Number)

46-4600503
(I.R.S. Employer
Identification No.)

43 Thorndike St.
Cambridge, Massachusetts 02141
(617) 682-0917

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

Joshua B. Cohen, Co-Chief Executive Officer
Justin B. Klee, Co-Chief Executive Officer
Amylyx Pharmaceuticals, Inc.
43 Thorndike St.
Cambridge, Massachusetts 02141
(617) 682-0917

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

Copies to:

Mitchell S. Bloom, Esq.
Benjamin K. Marsh, Esq.
Goodwin Procter LLP
100 Northern Avenue
Boston, Massachusetts 02210
(617) 570-1000

Lisa Firenze, Esq.
Stuart M. Falber, Esq.
Jeffries Oliver-Li, Esq.
Wilmer Cutler Pickering Hale and Dorr LLP
7 World Trade Center
250 Greenwich Street
New York, New York 10007
(212) 230-8800

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. **333-261703**

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

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

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

Large accelerated filer
Non-accelerated filer

Accelerated filer
Smaller reporting company
Emerging growth company

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

CALCULATION OF REGISTRATION FEE

Class of Securities To Be Registered	Amount to be Registered (1)	Proposed Maximum Aggregate Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee (2)
Common Stock, \$0.0001 par value per share	1,437,500	\$19.00	\$27,312,500.00	\$2,531.87

(1) Represents only the additional number of shares being registered and includes 187,500 shares that the underwriters have the option to purchase. Does not include the securities that the Registrant previously registered on the Registration Statement on Form S-1 (File No. 333-261703).

(2) Calculated pursuant to Rule 457(a) under the Securities Act of 1933 as amended, based on the proposed maximum aggregate offering price. The Registrant previously registered securities at an aggregate offering price not to exceed \$201,250,000 on a Registration Statement on Form S-1, as amended (File No. 333-261703), which was declared effective by the Securities and Exchange Commission on January 6, 2022. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of \$27,312,500 is hereby registered, which includes shares issuable upon the exercise of the underwriters' option to purchase additional shares.

The Registration Statement shall become effective upon filing in accordance with Rule 462(b) promulgated under the Securities Act of 1933, as amended.

EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

This Registration Statement is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Securities Act"), for the sole purpose of increasing the aggregate number of shares of common stock offered by Amylyx Pharmaceuticals, Inc. (the "Registrant") by 1,437,500 shares, of which 187,500 are subject to purchase upon exercise of the underwriters' option to purchase additional shares of the Registrant's common stock. The contents of the Registration Statement on Form S-1, as amended ([File No. 333-261703](#)), filed by the Registrant with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act, which was declared effective by the Commission on January 6, 2022 (the "Prior Registration Statement"), are incorporated by reference into this Registration Statement. The additional securities that are being registered for issuance and sale are in an amount and at a price that together represent no more than 20% of the maximum aggregate offering price set forth in the Calculation of Registration Fee table contained in the Prior Registration Statement.

The required opinion and consents are listed on an Exhibit Index attached hereto and filed herewith.

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
5.1	Opinion of Goodwin Procter LLP.
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm.
23.2	Consent of Goodwin Procter LLP (included in Exhibit 5.1).
24.1*	Power of Attorney.

* Previously filed on the signature page to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-261703), originally filed with the Securities and Exchange Commission on December 16, 2021 and incorporated by reference herein.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on this 6th day of January, 2022.

AMYLYX PHARMACEUTICALS, INC.

By: /s/ Joshua Cohen

Joshua Cohen
Co-Chief Executive Officer

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Joshua Cohen</u> Joshua Cohen	Co-Chief Executive Officer and Director (Principal Executive Officer)	January 6, 2022
<u>/s/ Justin Klee</u> Justin Klee	Co-Chief Executive Officer and Director (Principal Executive Officer)	January 6, 2022
<u>/s/ James M. Frates</u> James M. Frates, MBA	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	January 6, 2022
<u>*</u> George Mclean Milne Jr, Ph.D.	Director	January 6, 2022
<u>*</u> Paul Fonteyne, MS, MBS	Director	January 6, 2022
<u>*</u> Isaac Cheng, M.D.	Director	January 6, 2022
<u>*</u> Daphne Quimi, MBA	Director	January 6, 2022

*By: /s/ Joshua Cohen

Name: Joshua Cohen

Title: Attorney-in-fact



Goodwin Procter LLP
The New York Times Building
620 Eighth Avenue
New York, NY 10018

goodwinlaw.com
+1 212 813 8800

January 6, 2022

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

Re: Securities Registered under Registration Statement on Form S-1

We have acted as counsel to you in connection with your filing of (i) a Registration Statement on Form S-1 (File No. 333-261703) (as amended or supplemented, the "Initial Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), and (ii) a second Registration Statement on Form S-1 filed pursuant to Rule 462(b) promulgated under the Securities Act (the "462(b) Registration Statement," and together with the Initial Registration Statement, the "Registration Statement"). This opinion letter is furnished to you in connection with your filing of the 462(b) Registration Statement, relating to the registration of the offering by Amylyx Pharmaceuticals, Inc., a Delaware corporation (the "Company") of up to 1,437,500 shares (the "Shares") of the Company's Common Stock, \$0.0001 par value per share, including Shares purchasable by the underwriters upon their exercise of an over-allotment option granted to the underwriters by the Company. The Shares are being sold to the several underwriters named in, and pursuant to, an underwriting agreement among the Company and such underwriters (the "Underwriting Agreement").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Underwriting Agreement, the Shares will be validly issued, fully paid and non-assessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the 462(b) Registration Statement and to the references to our firm under the caption "Legal Matters" in the Initial Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Goodwin Procter LLP
GOODWIN PROCTER LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-1 of our report dated April 26, 2021, relating to the financial statements of Amylyx Pharmaceuticals, Inc. appearing in Registration Statement No. 333-261703 on Form S-1 of Amylyx Pharmaceuticals, Inc. We also consent to the reference to us under the heading "Experts" in Registration Statement No. 333-261703 on Form S-1.

/s/ Deloitte & Touche LLP

Boston, Massachusetts
January 6, 2022