UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 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) 46-4600503 (I.R.S. Employer Identification No.)

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

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

Amylyx Pharmaceuticals, Inc. 2022 Stock Option and Incentive Plan Amylyx Pharmaceuticals, Inc. 2022 Employee Stock Purchase Plan (Full title of the plans)

> Joshua B. Cohen, Co-Chief Executive Officer Justin B. Klee, Co-Chief Executive Officer Amylyx Pharmaceuticals, Inc. 43 Thorndike St. Cambridge, MA 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. Marishka DeToy, Esq. Goodwin Procter LLP 100 Northern Avenue Boston, MA 02210 (617) 570-1000

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

Large accelerated filer	\boxtimes	Accelerated filer	
Non-accelerated filer		Smaller reporting company	
		Emerging growth company	
If an emerging growth co	mpany indicate by check mark if the registrant has elected not to	ouse the extended transition period for complying with an	ıv

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. \Box

Statement of Incorporation by Reference

This Registration Statement on Form S-8 is filed to register the offer and sale of (i) an additional 3,385,371 shares of the Registrant's common stock, \$0.0001 par value per share, to be issued under the Registrant's 2022 Stock Option and Incentive Plan and (ii) an additional 677,074 shares of the Registrant's common stock, \$0.0001 par value per share, to be issued under the Registrant's 2022 Employee Stock Purchase Plan. This Registration Statement incorporates by reference the contents of the registration statements on Form S-8 (File No. 333-262125 and File No. 333-270509) filed by the Registrant on January 12, 2022 and March 13, 2023, respectively.

Part II Information Required in the Registration Statement

Item 8. Exhibits.

See the Exhibit Index below for a list of exhibits filed as part of this registration statement on Form S-8, which Exhibit Index is incorporated herein by reference.

EXHIBIT INDEX

Exhibit No.	Description
4.1	Fourth Amended and Restated Certificate of Incorporation of Amylyx Pharmaceuticals, Inc. (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 11, 2022).
4.2	Second Amended and Restated Bylaws of Amylyx Pharmaceuticals, Inc. (Incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 11, 2022).
4.3	Second Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, dated July 1, 2021 (Incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-261703), filed with the Securities and Exchange Commission on December 16, 2021).
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 (included on signature page).
99.1	2022 Stock Option and Incentive Plan, and form of award agreements thereunder (Incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1/A (File No. 333-261703) filed with the Securities and Exchange Commission on January 3, 2022).
99.2	2022 Employee Stock Purchase Plan (Incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form S-1/A (File No. 333-261703) filed with the Securities and Exchange Commission on January 3, 2022).
107*	Filing Fee Table.

^{*} Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, State of Massachusetts, on this 22nd day of February, 2024.

AMYLYX PHARMACEUTICALS, INC.

By: /s/ Joshua Cohen
Joshua Cohen

Co-Chief Executive Officer and Director

By: /s/ Justin Klee
Justin Klee
Co-Chief Executive Officer and Director

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Joshua Cohen and Justin Klee and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each of said attorney-in-fact or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Name	Title	Date
/s/ Joshua Cohen Joshua Cohen	Co-Chief Executive Officer and Director (Principal Executive Officer)	February 22, 2024
/s/ Justin Klee Justin Klee	Co-Chief Executive Officer and Director (Principal Executive Officer)	February 22, 2024
/s/ James M. Frates James M. Frates, MBA	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 22, 2024
/s/ Karen Firestone Karen Firestone	Director	February 22, 2024
/s/ George Mclean Milne Jr. George Mclean Milne Jr., Ph.D.	Director	February 22, 2024
/s/ Paul Fonteyne Paul Fonteyne, MS, MBS	Director	February 22, 2024
/s/ Daphne Quimi Daphne Quimi, MBA	Director	February 22, 2024



Goodwin Procter LLP 100 Northern Ave. Boston, MA 02210 goodwinlaw.com +1 617 570 1000

February 22, 2024

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

Re: <u>Securities Being Registered under Registration Statement on Form S-8</u>

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-8 (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on or about the date hereof relating to an aggregate of 4,062,445 shares (the "Shares") of Common Stock, par value \$0.0001 per share ("Common Stock"), of Amylyx Pharmaceuticals, Inc., a Delaware corporation (the "Company"), that may be issued pursuant to the Company's 2022 Stock Option and Incentive Plan and 2022 Employee Stock Purchase Plan (collectively, the "Plans").

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 opinion set forth below, on certificates of officers of the Company.

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

For purposes of the opinion set forth below, we have assumed that no event occurs that causes the number of authorized shares of Common Stock available for issuance by the Company to be less than the number of then unissued Shares.

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 Plans, will be validly issued, fully paid and nonassessable.

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. 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-8 of our reports dated February 22, 2024, relating to the financial statements of Amylyx Pharmaceuticals, Inc. and the effectiveness of Amylyx Pharmaceuticals, Inc.'s internal control over financial reporting, appearing in the Annual Report on Form 10-K of Amylyx Pharmaceuticals, Inc. for the year ended December 31, 2023.

/s/ Deloitte & Touche LLP

Boston, Massachusetts February 22, 2024

CALCULATION OF REGISTRATION FEE

Form S-8 (Form Type)

Amylyx Pharmaceuticals, Inc.

(Exact name of Registrant as Specified in its Charter)

Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Share	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, \$0.0001 par value per	Rule 457(c)	3,385,371	\$15.62 (3)	\$52,879,495.02 (3)	\$0.00014760	\$7,805.01
	share, reserved for issuance pursuant to	and Rule	shares (2)				
	the Amylyx Pharmaceuticals, Inc. 2022	457(h)					
	Stock Option and Incentive Plan						
Equity	Common Stock, \$0.0001 par value per	Rule 457(c)	677,074	\$13.28 (5)	\$8,991,542.72 (5)	\$0.00014760	\$1,327.15
	share, reserved for issuance pursuant to	and Rule	shares (4)				
	the Amylyx Pharmaceuticals, Inc. 2022	457(h)					
	Employee Stock Purchase Plan						
	Total Offering Amounts				\$61,871,037.74		_
Total Fees Previously Paid						_	
Total Fee Offsets						_	
Net Fee Due						\$9,132.17	

- (1) In accordance with Rule 416 under the Securities Act of 1933, as amended, this registration statement shall be deemed to cover any additional securities that may from time to time be offered or issued to prevent dilution resulting from stock splits, stock dividends or similar transactions effected without the receipt of consideration which results in an increase in the number of our outstanding shares of common stock.
- (2) Represents an automatic increase to the number of shares available for issuance under the 2022 Stock Option and Incentive Plan (the "2022 Plan") of 3,385,371, effective as of January 1, 2024. Shares available for issuance under the 2022 Plan were previously registered on registration statements on Form S-8 filed with the Securities and Exchange Commission on January 12, 2022 (File No. 333-262125) and March 13, 2023 (File No. 333-270509).
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act of 1933, as amended. The price per share and aggregate offering price are calculated on the basis of \$15.62, the average of the high and low price of the registrant's Common Stock as reported on the Nasdaq Global Market on February 16, 2024.
- (4) Represents an automatic increase to the number of shares available for issuance under the 2022 Employee Stock Purchase Plan (the "2022 ESPP") of 677,074, effective as of January 1, 2024. Shares available for issuance under the 2022 ESPP were previously registered on registration statements on Form S-8 filed with the Securities and Exchange Commission on January 12, 2022 (File No. 333-262125) and March 13, 2023 (File No. 333-270509).
- (5) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) and 457(h) of the Securities Act, and based on 85% of the average of the high and low sales price of the Registrant's common stock, as reported on the Nasdaq Global Select Market, on February 16, 2024. Pursuant to the 2022 ESPP, the purchase price of the shares of common stock reserved for issuance thereunder will be 85% of the fair market value per share of common stock on the applicable offering date or on the exercise date of the applicable offering period, whichever is less.