UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

VOYAGER THERAPEUTICS, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

46-3003182

(State or Other Jurisdiction of Incorporation or Organization)

(I.R.S. Employer Identification No.)

75 Sidney Street, Cambridge, MA

02139

(Address of Principal Executive Offices)

(Zip Code)

Voyager Therapeutics, Inc. 2015 Stock Option and Incentive Plan Voyager Therapeutics, Inc. 2015 Employee Stock Purchase Plan Inducement Stock Option Grant Awards Inducement Restricted Stock Unit Awards

(Full Title of the Plans)

G. Andre Turenne
Chief Executive Officer
Voyager Therapeutics, Inc.
75 Sidney Street
Cambridge, Massachusetts 02139
(Name and Address of Agent for Service)

(857) 259-5340

(Telephone Number, Including Area Code, of Agent For Service)

Copy to:

Brian A. Johnson, Esq.

Wilmer Cutler Pickering Hale and Dorr LLP
7 World Trade Center
250 Greenwich Street
New York, New York 10007
(212) 230-8800

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 o

Accelerated filer x

Non-accelerated filer o

Smaller reporting company x

Emerging growth company x

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. x

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	F	Amount of Registration Fee
Common Stock, \$0.001 par value per share	1,628,537 shares(2)	\$ 10.76(3)	\$ 17,523,059	\$	2,123.80
Common Stock, \$0.001 par value per share	650,000 shares(4)	\$ 18.03(5)	\$ 11,719,500	\$	1,420.41
Common Stock, \$0.001 par value per share	338,750 shares(6)	\$ 10.76(3)	\$ 3,644,950	\$	441.77
Common Stock, \$0.001 par value per share	58,125 shares(7)	\$ 10.76(3)	\$ 625,425	\$	75.81

- (1) In accordance with Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), 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.
- (2) Consists of (i) 1,302,830 shares issuable under the 2015 Stock Option and Incentive Plan and (ii) 325,707 shares issuable under the 2015 Employee Stock Purchase Plan.

- Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act, and based upon the average of the high and low prices of the Registrant's Common Stock as reported on the Nasdaq Global Select Market on February 21, 2019, in accordance with Rule 457(c) under the Securities Act for the 1,628,537 shares issuable in the aggregate under the 2015 Stock Option and Incentive Plan and 2015 Employee Stock Purchase Plan that are not subject to outstanding equity awards and the 396,875 shares issuable in the aggregate under inducement stock option awards (the "Inducement Stock Option Awards") and inducement restricted stock unit awards (the "Inducement Restricted Stock Unit Awards") granted by the Registrant as material inducements to the individuals' acceptances of employment with the Registrant and effective upon such individuals' respective commencement dates of employment, in accordance with Nasdaq Listing Rule 5635(c) (4).
- (4) Consists of 650,000 shares granted by the Registrant to G. Andre Turenne as a material inducement to his acceptance of employment with the Registrant in accordance with Nasdaq Listing Rule 5635(c)(4).
- (5) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(h) of the Securities Act. The price per share and aggregate offering price are calculated on the basis of \$18.03, the exercise price of the shares covered by this registration statement that are subject to G. Andre Turenne's inducement stock option award.
- (6) Consists of 338,750 shares issuable under the Inducement Stock Option Awards.
- (7) Consists of 58,125 shares issuable upon settlement of the Inducement Restricted Stock Unit Awards.

PART I: INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information.

The information required by Item 1 is included in documents sent or given to participants in the plans covered by this registration statement pursuant to Rule 428(b)(1) of the Securities Act of 1933, as amended (the "Securities Act").

Item 2. Registrant Information and Employee Plan Annual Information.

The written statement required by Item 2 is included in documents sent or given to participants in the plans covered by this registration statement pursuant to Rule 428(b)(1) of the Securities Act.

PART II: INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The registrant is subject to the informational and reporting requirements of Sections 13(a), 14, and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and in accordance therewith files reports, proxy statements and other information with the Securities and Exchange Commission (the "Commission"). The following documents, which are on file with the Commission, are incorporated in this registration statement by reference:

- (a) The registrant's latest annual report filed pursuant to Section 13(a) or 15(d) of the Exchange Act or the latest prospectus filed pursuant to Rule 424(b) under the Securities Act that contains audited financial statements for the registrant's latest fiscal year for which such statements have been filed.
- (b) All other reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the document referred to in (a) above.
- (c) The description of the securities contained in the registrant's registration statement on Form 8-A filed under the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All documents subsequently filed by the registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be part hereof from the date of the filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Wilmer Cutler Pickering Hale and Dorr LLP ("WilmerHale") has opined as to the legality of the securities being offered by this registration statement.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law (the "DGCL") permits a corporation to include in its charter documents, and in agreements between the corporation and its directors and officers, provisions expanding the scope of indemnification beyond that specifically provided by the current law.

Section 102(b)(7) of the DGCL permits a corporation to eliminate the personal liability of its directors or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. The registrant's certificate of incorporation provides that none of its directors shall be personally liable to the registrant or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the DGCL prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

The registrant's amended and restated certificate of incorporation provides for the indemnification of directors to the fullest extent permissible under Delaware law.

The registrant's amended and restated by-laws provide for the indemnification of officers, directors and third parties acting on the registrant's behalf if such persons act in good faith and in a manner reasonably believed to be in and not opposed to the registrant's best interest, and, with respect to any criminal action or proceeding, such indemnified party had no reason to believe his or her conduct was unlawful.

The registrant has entered into indemnification agreements with each of its directors and executive officers, in addition to the indemnification provisions provided for in its charter documents, and the registrant intends to enter into indemnification agreements with any new directors and executive officers in the future. These agreements provide for indemnification for all reasonable expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were agents of the registrant.

The registrant has purchased and intends to maintain insurance on behalf of any person who is or was a director or officer against any loss arising from any claim asserted against him or her and incurred by him or her in that capacity, subject to certain exclusions and limits of the amount of coverage.

These indemnification provisions and the indemnification agreements entered into between the registrant and its officers and directors may be sufficiently broad to permit indemnification of the registrant's officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Number

4.1	Specimen Common Stock Certificate of the Registrant (Incorporated by reference to Exhibit 4.1 to the Registrant's Annual Report on Form 10-K (File No. 001-37625) filed on March 14, 2018).
4.2	Fifth Amended and Restated Certificate of Incorporation (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-37625) filed on November 16, 2015).
4.3	Amended and Restated Bylaws (Incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-37625) filed on November 16, 2015).

Description

- 4.4 Second Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated April 10, 2015 (Incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-207367) filed on October 28, 2015). 5.1 Opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Registrant.
- 23.1 Consent of Wilmer Cutler Pickering Hale and Dorr LLP (Included in Exhibit 5.1).
- 23.2 Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
- 24.1 Power of Attorney (included on the signature page of this registration Statement).
- 99.1 2015 Stock Option and Incentive Plan and forms of award agreements thereunder (Incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-207367) filed on October 28, 2015).
- 2015 Employee Stock Purchase Plan (Incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form S-1, as 99.2 amended (File No. 333-207367) filed on October 28, 2015).
- Amendment No. 1 to 2015 Employee Stock Purchase Plan (Incorporated by reference to Exhibit 10.21 to the Registrant's Annual Report on 99.3 Form 10-K (File No. 001-37625) filed on March 14, 2018).
- Form of Non-Qualified Stock Option Agreement for Inducement Grant (Incorporated by reference to Exhibit 10.27 to the Registrant's 99.4 Annual Report on Form 10-K (File No. 001-37625) filed February 26, 2019).
- Form of Restricted Stock Unit Agreement for Inducement Grant (Incorporated by reference to Exhibit 10.33 to the Registrant's Annual 99.5 Report on Form 10-K (File No. 001-37625) filed February 26, 2019).

Item 9. Undertakings.

- (a) The undersigned registrant hereby undertakes:
 - (1.)To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i.) To include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii.) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of a prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii.) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, *however*, that paragraphs (a)(1)(i) and (a)(1)(ii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

- (2.) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3.) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Cambridge, Massachusetts, on this 26th day of February, 2019.

VOYAGER THERAPEUTICS, INC.

By: /s/ G. Andre Turenne

G. Andre Turenne

President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Voyager Therapeutics, Inc., hereby severally constitute and appoint G. Andre Turenne and Allison Dorval, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below, the registration statement on Form S-8 filed herewith and any and all subsequent amendments to said registration statement, and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable Voyager Therapeutics, Inc., to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

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

Signature	Title	Date
/s/ G. Andre Turenne G. Andre Turenne	President, Chief Executive Officer and Director (Principal executive officer)	February 26, 2019
/s/ Allison Dorval Allison Dorval	Chief Financial Officer (Principal financial and accounting officer)	February 26, 2019
/s/ Mark Levin Mark Levin	Director	February 26, 2019
/s/ Jim Geraghty Jim Geraghty	Director	February 26, 2019
/s/ Michael Higgins Michael Higgins	Director	February 26, 2019
/s/ Perry A. Karsen Perry A. Karsen	Director	February 26, 2019
/s/ Steven Hyman, M.D. Steven Hyman, M.D.	Director	February 26, 2019
/s/ Wendy Dixon, Ph.D. Wendy Dixon, Ph.D.	Director	February 26, 2019
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/s/ Glenn Pierce, M.D., Ph.D. Glenn Pierce, M.D., Ph.D.	Director	February 26, 2019
/s/ Steven Paul M.D. Steven Paul, M.D.	Director	February 26, 2019
	7	

WILMERHALE

+1 212 230-8800 (t) +1 212 230 8888 (f) Wilmerhale.com

February 26, 2019

Voyager Therapeutics, Inc. 75 Sidney Street Cambridge, Massachusetts 02139

Re: 2015 Stock Option and Incentive Plan

2015 Employee Stock Purchase Plan Inducement Stock Option Awards Inducement Restricted Stock Unit Awards

Ladies and Gentlemen:

We have assisted in the preparation of a Registration Statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to an aggregate of 2,675,412 shares of common stock, \$0.001 par value per share (the "Common Stock"), of Voyager Therapeutics, Inc., a Delaware corporation (the "Company"), consisting of (i) an aggregate of 1,628,537 shares of Common Stock (the "Plan Shares") issuable under the Company's 2015 Stock Option and Incentive Plan and the Company's 2015 Employee Stock Purchase Plan (collectively, the "Plans"), (ii) an aggregate of 988,750 shares of Common Stock issuable pursuant to nonqualified stock option agreements (the "Inducement Stock Option Award Agreements") providing for inducement grants between the Company and various individuals, which were entered into as material inducements to the individuals' acceptances of employment with the Company and effective upon such individuals' commencement dates of employment with the Company, pursuant to Nasdaq Stock Market Rule 5635(c)(4) (the "Inducement Stock Option Award Agreements") and, collectively with the Inducement Stock Option Award Agreements, the "Inducement Award Agreements") providing for employee inducement grants between the Company and various individuals, which were entered into as material inducements to the individuals' acceptances of employment with the Company and effective upon such individuals, which were entered into as material inducements to the individuals' acceptances of employment with the Company and effective upon such individuals, commencement dates of employment with the Company, pursuant to Nasdaq Stock Market Rule 5635(c)(4) (the "Inducement Restricted Stock Unit Award Shares" and, collectively with the Plan Shares and the Inducement Stock Option Award Shares, the "Shares").

We have examined the Certificate of Incorporation and By-Laws of the Company, each as amended and restated to date, and originals, or copies certified to our satisfaction, of all pertinent records of the meetings of the directors and stockholders of the Company, the Registration Statement and such other documents relating to the Company as we have deemed material for the purposes of this opinion.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, photostatic or other copies, the authenticity of the originals of any such documents and the legal competence of all signatories to such documents.

Wilmer Cutler Pickering Hale and Dorr LLP, 7 World Trade Center, 250 Greenwich Street, New York, New York 10007

Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Palo Alto Washington

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares in accordance with the Plans or the Inducement Award Agreements, as applicable, to register and qualify the Shares for sale under all applicable state securities or "blue sky" laws.

We express no opinion herein as to the laws of any state or jurisdiction other than the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized for issuance and, when the Shares are issued and paid for in accordance with the terms and conditions of the Plans or the Inducement Award Agreements, as applicable, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion with the Commission in connection with the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act. In giving such consent, we do not hereby 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 of the Commission.

Very truly yours,

WILMER CUTLER PICKERING HALE AND DORR LLP

By: /s/ Brian A. Johnson

Brian A. Johnson, a Partner

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2015 Stock Option and Incentive Plan, the 2015 Employee Stock Purchase Plan, Inducement Stock Option Grant Awards, and Inducement Restricted Stock Unit Awards of Voyager Therapeutics, Inc. of our report dated February 26, 2019 with respect to the consolidated financial statements of Voyager Therapeutics, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2018, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts February 26, 2019