Registration No. 333-

X

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

OCULAR THERAPEUTIX, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

> 15 Crosby Drive Bedford, MA

(Address of Principal Executive Offices)

20-5560161 (I.R.S. Employer Identification No.)

01730 (Zip Code)

2014 Employee Stock Purchase Plan (Full Title of the Plan)

Antony Mattessich President and Chief Executive Officer Ocular Therapeutix, Inc. 15 Crosby Drive Bedford, MA 01730

(Name and Address of Agent for Service)

(781) 357-4000

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

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 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. \Box

EXPLANATORY NOTE

This Registration Statement on Form S-8, relating to 207,402 shares of the common stock, \$0.0001 par value per share (the "Common Stock"), issuable under the 2014 Employee Stock Purchase Plan, as amended (the "2014 ESPP") of Ocular Therapeutix, Inc. (the "Registrant"), is being filed for the purpose of registering additional securities of the same class as other securities for which a Registration Statement on Form S-8 has previously been filed and is effective. Accordingly, this Registration Statement incorporates by reference the contents of (i) the Registration Statement on Form S-8 (File No. 333-198240) filed with the Securities and Exchange Commission (the "SEC") on August 19, 2014, by the Registrant relating to the Registrant's 2006 Stock Incentive Plan, as amended, the Registrant's 2014 Stock Incentive Plan (the "2014 Plan"), and the 2014 ESPP; (ii) the Registration Statement on Form S-8 (File No. 333-202886) filed with the SEC on March 20, 2015, by the Registrant relating to the 2014 Plan and the 2014 ESPP; (iii) the Registration Statement on Form S-8 (File No. 333-210059) filed with the SEC on March 10, 2016, by the Registrant relating to the 2014 Plan and the 2014 ESPP; (iv) the Registration Statement on Form S-8 (File No. 333-216622) filed with the SEC on March 10, 2017, by the Registrant relating to the 2014 Plan and the 2014 ESPP; (v) the Registration Statement on Form S-8 (File No. 333-223513) filed with the SEC on March 8, 2018, by the Registrant relating to the 2014 Plan, the 2014 ESPP and the Registrant's Inducement Stock Option Grant to Antony Mattessich; (vi) the Registration Statement on Form S-8 (File No. 333-230126) filed with the SEC on March 7, 2019, by the Registrant relating to the 2014 Plan and the 2014 ESPP; (vii) the Registration Statement on Form S-8 (File No. 333-237115) filed with the SEC on March 12, 2020, by the Registrant relating to the 2014 Plan, the 2014 ESPP, the Registrant's Inducement Stock Option Grant to Christopher White and the Registrant's 2019 Inducement Stock Incentive Plan (the "2019 Inducement Plan"); (viii) the Registration Statement on Form S-8 (File No. 333-254143) filed with the SEC on March 11, 2021, by the Registrant relating to the 2014 Plan, the 2014 ESPP and the 2019 Inducement Plan; (ix) the Registration Statement on Form S-8 (File No. 333-263091) filed with the SEC on February 28, 2022, by the Registrant relating to the 2014 ESPP; and (x) the Registration Statement on Form S-8 (File No. 333-270297) filed with the SEC on March 6, 2023, by the Registrant relating to the 2014 ESPP, in each case, except to the extent amended or superseded by the contents hereof and, in the case of items (i) through (viii) above, as amended by Post-Effective Amendment No. 1 to Form S-8 Registration Statements relating to such Form S-8 Registration Statement, filed with the SEC on August 9, 2021.

Item 8. Exhibits.

The following exhibits are incorporated herein by reference.

Number Description

- 4.1(1) Restated Certificate of Incorporation of the Registrant, as amended
- 4.2(2) Amended and Restated By-laws of the Registrant
- 4.3(3) Registration Rights Agreement, dated as of March 1, 2019, by and among the Registrant and the Purchasers identified therein
- 4.4(4) Registration Rights Agreement, dated February 21, 2024, by and among the Registrant and the other parties thereto
- 5.1 Opinion of Wilmer Cutler Pickering Hale and Dorr LLP
- 23.1 Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1)
- 23.2 Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm
- 24.1 Power of Attorney (included on signature page)
- 99.1(5) 2014 Employee Stock Purchase Plan
- 99.2(6) Amendment No. 1 to Employee Stock Purchase Plan, effective October 4, 2023
- 107 Filing Fee Table
- (1) Previously filed with the Securities and Exchange Commission on August 9, 2021, as Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-36554) and incorporated herein by reference.
- (2) Previously filed with the Securities and Exchange Commission on July 30, 2014, as Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-36554) and incorporated herein by reference.
- (3) Previously filed with the Securities and Exchange Commission on March 7, 2019, as Exhibit 4.2 to the Registrant's Annual Report on Form 10-K (File No. 001-36554) and incorporated herein by reference.
- (4) Previously filed with the Securities and Exchange Commission on February 22, 2024, as Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-36554) and incorporated herein by reference.
- (5) Previously filed with the Securities and Exchange Commission on July 11, 2014, as Exhibit 10.10 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (File No. 333-196932) and incorporated herein by reference.
- (6) Previously filed with the Securities and Exchange Commission on November 7, 2023, as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-36554) and incorporated herein by reference.

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 Bedford, Massachusetts, on this 11th day of March, 2024.

OCULAR THERAPEUTIX, INC.

By:	/s/ Antony Mattessich					
	Antony Mattessich					
	President and Chief Executive Officer					

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Ocular Therapeutix, Inc., hereby severally constitute and appoint Antony Mattessich and Donald Notman, 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 Ocular Therapeutix, 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.

<u>Signature</u>	Title	Date
/s/ Antony Mattessich Antony Mattessich	President, Chief Executive Officer and Director (Principal Executive Officer)	March 11, 2024
/s/ Donald Notman Donald Notman	Chief Financial Officer (Principal Financial and Accounting Officer)	March 11, 2024
/s/ Pravin Dugel, M.D. Pravin Dugel, M.D.	Executive Chairman of the Board of Directors	March 11, 2024
/s/ Adrienne Graves, Ph.D. Adrienne Graves, Ph.D.	Director	March 11, 2024
/s/ Seung Suh Hong, Ph.D. Seung Suh Hong, Ph.D.	Director	March 11, 2024
/s/ Richard L. Lindstrom, M.D. Richard L. Lindstrom, M.D.	Director	March 11, 2024
/s/ Merilee Raines Merilee Raines	Director	March 11, 2024
/s/ Charles Warden Charles Warden	Director	March 11, 2024
/s/ Leslie Williams Leslie Williams	Director	March 11, 2024

Ocular Therapeutix, Inc. 15 Crosby Drive Bedford, MA 01730

Re: 2014 Employee Stock Purchase Plan

Ladies and Gentlemen:

WILMERHALE

+ 1 617 526 6000 (t) + 1 617 526 5000 (f)

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 207,402 shares of common stock, \$0.0001 par value per share (the "Shares"), of Ocular Therapeutix, Inc., a Delaware corporation (the "Company"), issuable under the Company's 2014 Employee Stock Purchase Plan, as amended (the "Plan").

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 board of directors and stockholders of the Company, the Registration Statement, the Plan 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.

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares in accordance with the Plan, 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.

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.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109 Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Palo Alto San Francisco Washington Ocular Therapeutix, Inc. March 11, 2024 Page 2

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 Plan, 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,

/s/ Wilmer Cutler Pickering Hale and Dorr LLP WILMER CUTLER PICKERING HALE AND DORR LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Ocular Therapeutix, Inc. of our report dated March 11, 2024 relating to the financial statements, which appears in Ocular Therapeutix, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2023.

/s/ PricewaterhouseCoopers LLP Boston, Massachusetts March 11, 2024

Calculation of Filing Fee Tables

Form S-8

(Form Type)

Ocular Therapeutix, Inc. (Exact Name of Registrant as Specified in its Charter)

Table 1—Newly Registered Securities

Security Class		Fee Calculation	Amount Registered	Ma O	oposed aximum Offering rice Per	Maximum Aggregate	Ess Data	mount of egistration	
Туре	Title	Rule	(1)	Unit		Offering Price	Fee Rate	Fee	
Equity	Common Stock, \$0.0001 par value per	Other	207,402	\$	10.62(3)	\$ 2,202,609.24(3)	\$147.60 per	\$ 325.11	
	share		shares (2)				\$1,000,000		
Total Offering Amounts						\$ 2,202,609.24		\$ 325.11	
Total Fee Offsets						—			
Net Fee Due					\$ 325.11				

(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 207,402 shares issuable under the 2014 Employee Stock Purchase Plan, as amended.

(3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act. The price per share and aggregate offering price are calculated on the basis of the average of the high and low sale prices of the registrant's common stock on the Nasdaq Global Market on March 7, 2024, in accordance with Rule 457(c) under the Securities Act.