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

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**FORM S-8  
REGISTRATION STATEMENT**  
*UNDER  
THE SECURITIES ACT OF 1933*

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**Taysha Gene Therapies, Inc.**  
(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**84-3199512**  
(I.R.S. Employer  
Identification No.)

**3000 Pegasus Park Drive  
Suite 1430  
Dallas, Texas 75247**  
(Address of principal executive offices, including zip code)

**Taysha Gene Therapies, Inc. 2020 Stock Incentive Plan  
Taysha Gene Therapies, Inc. 2020 Employee Stock Purchase Plan**  
(Full titles of the plans)

**Sean P. Nolan  
Chief Executive Officer  
3000 Pegasus Park Drive  
Suite 1430  
Dallas, Texas 75247  
(214) 612-0000**  
(Name, address and telephone number, including area code, of agent for service)

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*Copies to:*

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**Divakar Gupta  
Madison A. Jones  
Mark Ballantyne  
Cooley LLP  
55 Hudson Yards  
New York, NY 10001  
Telephone: (212) 479-6000  
Facsimile: (212) 479-6275**

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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.

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**EXPLANATORY NOTE  
REGISTRATION OF ADDITIONAL SHARES**

Pursuant to General Instruction E of Form S-8, Taysha Gene Therapies, Inc. (the “*Registrant*”) is filing this Registration Statement on Form S-8 with the Securities and Exchange Commission (the “*Commission*”) for the purpose of registering (i) 9,348,009 additional shares of its common stock under the Registrant’s 2020 Stock Incentive Plan (the “*2020 Plan*”), pursuant to the provisions of the 2020 Plan providing for an automatic increase in the number of shares of common stock reserved and available for issuance under the 2020 Plan on January 1, 2024, and (ii) 724,000 additional shares of its common stock under the Registrant’s 2020 Employee Stock Purchase Plan (the “*2020 ESPP*,” and together with the 2020 Plan the “*Plans*”), pursuant to the provisions of the 2020 ESPP providing for an automatic increase in the number of shares of common stock reserved and available for issuance under the 2020 ESPP on January 1, 2024. In accordance with the instructional note to Part I of Form S-8 as promulgated by the Commission, the information specified by Part I of the Form S-8 has been omitted from this Registration Statement.

The Registrant previously registered shares of its common stock for issuance under the Plans on a Registration Statement on Form S-8 filed with the Commission on September 29, 2020 (File No. 333-249130), a Registration Statement on Form S-8 filed with the Commission on May 11, 2021 (File No. 333-256013), a Registration Statement on Form S-8 filed with the Commission on March 31, 2022 (File No. 333-264025) and a Registration Statement on Form S-8 filed with the Commission on March 28, 2023 (File No. 333-270915). Pursuant to General Instruction E to Form S-8, this Registration Statement hereby incorporates by reference the contents of the Registration Statements referenced above except as set forth below.

**PART II  
INFORMATION REQUIRED IN REGISTRATION STATEMENT**

**ITEM 3. INCORPORATION OF DOCUMENTS BY REFERENCE**

The following documents filed by the Registrant with the Commission are incorporated by reference into this Registration Statement:

- (a) The Registrant’s Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, filed with the Commission on March 19, 2024.
- (b) The Registrant’s Current Report on [Form 8-K](#) filed with the Commission on March 19, 2024, to the extent the information in such report is filed and not furnished.
- (c) The description of the Registrant’s common stock which is contained in the Registrant’s Registration Statement on [Form 8-A](#) filed on September 18, 2020 (File No 001-39536) under the Securities Exchange Act of 1934, as amended (the “*Exchange Act*”), as updated by [Exhibit 4.2](#) to the Registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2020, including any amendment or report filed for the purpose of updating such description.
- (d) All other reports and documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that relate to such items) on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be

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deemed to be incorporated by reference herein and to be a part of this Registration Statement from the date of the filing of such reports and 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 purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document that also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

**ITEM 8. EXHIBITS**

Exhibit Number	Description	Incorporated by Reference			
		Schedule Form	File Number	Exhibit	Filing Date
4.1	<a href="#">Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect</a>	8-K	001-39536	3.1	September 29, 2020
4.2	<a href="#">Certificate of Amendment to the Amended and Restated Certificate of Incorporation</a>	8-K	001-39536	3.1	November 15, 2023
4.3	<a href="#">Amended and Restated Bylaws of the Registrant, as currently in effect</a>	S-1/A	333-248559	3.4	September 17, 2020
5.1*	<a href="#">Opinion of Cooley LLP</a>				
23.1*	<a href="#">Consent of Cooley LLP (included in Exhibit 5.1)</a>				
23.2*	<a href="#">Consent of Deloitte &amp; Touche LLP, independent registered public accounting firm</a>				
24.1*	<a href="#">Power of Attorney (included on the signature page of this Form S-8)</a>				
99.1	<a href="#">2020 Stock Incentive Plan and Forms of Stock Option Grant Notice, Stock Option Agreement, Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement</a>	S-1/A	333-248559	10.6	September 17, 2020
99.2	<a href="#">2020 Employee Stock Purchase Plan</a>	S-1/A	333-248559	10.7	September 17, 2020
107*	<a href="#">Filing Fee Table</a>				

\* Filed herewith.

## 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 the City of Dallas, State of Texas, on this 19<sup>th</sup> day of March, 2024.

### TAYSHA GENE THERAPIES, INC.

By: /s/ Sean P. Nolan

Sean P. Nolan

*Chief Executive Officer*

## POWER OF ATTORNEY

**KNOW ALL PERSONS BY THESE PRESENTS**, that each person whose signature appears below constitutes and appoints Sean P. Nolan and Kamran Alam, and each one of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in their name, place or stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or her 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 dates indicated.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Sean P. Nolan</u> Sean P. Nolan	Chief Executive Officer and Chairman <i>(Principal Executive Officer)</i>	March 19, 2024
<u>/s/ Kamran Alam</u> Kamran Alam	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	March 19, 2024
<u>/s/ Phillip B. Donenberg</u> Phillip B. Donenberg	Director	March 19, 2024
<u>/s/ Sean Stalfort</u> Sean Stalfort	Director	March 19, 2024
<u>/s/ Sukumar Nagendran, M.D.</u> Sukumar Nagendran, M.D.	President, Head of Research and Development, and Director	March 19, 2024
<u>/s/ Alison Long, M.D., Ph.D.</u> Alison Long, M.D., Ph.D.	Director	March 19, 2024
<u>/s/ Laura Sepp-Lorenzino, Ph.D.</u> Laura Sepp-Lorenzino, Ph.D.	Director	March 19, 2024



Mark Ballantyne  
T: +1 703 456 8084  
[mballantyne@cooley.com](mailto:mballantyne@cooley.com)

March 19, 2024

Taysha Gene Therapies, Inc.  
3000 Pegasus Park Drive, Suite 1430  
Dallas, Texas, 75247

We have represented Taysha Gene Therapies, Inc., a Delaware corporation (the "**Company**"), in connection with the filing by the Company of a Registration Statement on Form S-8 (the "**Registration Statement**") with the Securities and Exchange Commission (the "**Commission**") covering the offering of up to 10,072,009 shares (the "**Shares**") of the Company's common stock, par value \$0.00001 per share ("**Common Stock**"), consisting of (a) 9,348,009 shares of Common Stock issuable pursuant to the Company's 2020 Stock Incentive Plan (the "**SIP**") and (b) 724,000 shares of Common Stock pursuant to the Company's 2020 Employee Stock Purchase Plan (together with the SIP, the "**Plans**").

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and the related prospectuses, (b) the Company's certificate of incorporation and bylaws, each as currently in effect, (c) the Plans and (d) such other records, documents, opinions, certificates, memoranda and instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials, and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Plans, the Registration Statement and the related prospectuses, will be validly issued, fully paid and nonassessable (except as to Shares issued pursuant to deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

This opinion is limited to the matters expressly set forth in this letter, and no opinion should be implied, or may be inferred, beyond the matters expressly stated. This opinion speaks only as to law and facts in effect or existing as of the date hereof and we have no obligation or responsibility to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

Cooley LLP One Freedom Square Reston Town Center 11951 Freedom Drive Reston, VA 20190-5640  
t: (703) 456-8000 f: (703) 456-8100 [cooley.com](http://cooley.com)

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We consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Commission thereunder.

Sincerely,

Cooley LLP

By: /s/ Mark Ballantyne  
Mark Ballantyne

Cooley LLP One Freedom Square Reston Town Center 11951 Freedom Drive Reston, VA 20190-5640  
t: (703) 456-8000 f: (703) 456-8100 cooley.com

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 19, 2024, relating to the financial statements of Taysha Gene Therapies, Inc. appearing in the Annual Report on Form 10-K of Taysha Gene Therapies, Inc. for the year ended December 31, 2023.

**/s/ Deloitte & Touche LLP**

Dallas, Texas  
March 19, 2024



## CALCULATION OF FILING FEE TABLES

## Form S-8

## Taysha Gene Therapies, Inc.

**Table 1: Newly Registered Securities**

Security Type	Security Class Title	Fee Calculation Rule	Amount to be Registered <sup>(1)</sup>	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common stock, \$0.00001 par value per share, reserved for future issuance pursuant to the Registrant's 2020 Stock Incentive Plan	Other <sup>(4)</sup>	9,348,009 <sup>(2)</sup>	\$2.16 <sup>(4)</sup>	\$20,191,699.44	.00014760	\$2,980.29
Equity	Common stock, \$0.00001 par value per share, reserved for future issuance pursuant to the Registrant's 2020 Employee Stock Purchase Plan	Other <sup>(5)</sup>	724,000 <sup>(3)</sup>	\$1.84 <sup>(5)</sup>	\$1,332,160.00	.00014760	\$196.63
Total Offering Amounts					\$21,523,859.44	—	\$3,176.92
Total Fees Previously Paid					—	—	—
Total Fee Offsets					—	—	—
Net Fee Due					—	—	\$3,176.92

- (1) Pursuant to Rule 416(a) promulgated under the Securities Act of 1933, as amended (the “*Securities Act*”), this Registration Statement shall also cover any additional shares of common stock of Taysha Gene Therapies, Inc. (the “*Registrant*”) that become issuable under the Registrant’s 2020 Stock Incentive Plan (the “*2020 Plan*”) and the Registrant’s 2020 Employee Stock Purchase Plan (the “*2020 ESPP*”) by reason of any stock dividend, stock split, recapitalization, or other similar transaction effected that results in an increase to the number of outstanding shares of the Registrant’s common stock, as applicable.
- (2) Represents shares of common stock that were added to the shares reserved for future issuance under the 2020 Plan on January 1, 2024, pursuant to an evergreen provision contained in the 2020 Plan. Pursuant to such provision, the number of shares reserved for issuance under the 2020 Plan will automatically increase on January 1 of each year for a period of 10 years, beginning on January 1, 2021 and continuing through (and including) January 1, 2030, in an amount equal to 5% of the total number of shares of the Registrant’s common stock outstanding on December 31 of the immediately preceding year, except that, before the date of any such increase, the Registrant’s board of directors may determine that the increase for such year will be a lesser number of shares.
- (3) Represents shares of common stock that were added to the shares reserved for future issuance under the 2021 ESPP on January 1, 2024, pursuant to an evergreen provision contained in the 2020 ESPP. Pursuant to such provision, the number of shares reserved for issuance under the 2020 ESPP will automatically increase on January 1 of each year for a period of 10 years, beginning on January 1, 2021 and continuing through (and including) January 1, 2030, by the lesser of (a) 1% of the total number of shares of the Registrant’s common stock outstanding on December 31 of the immediately preceding year and (b) 724,000 shares, except that, before the date of any such increase, the Registrant’s board of directors may determine that the increase for such year will be less than the amount set forth in clauses (a) and (b).
- (4) Estimated in accordance with Rules 457(c) and 457(h) solely for the purpose of calculating the registration fee on the basis of \$2.16 per share, which is the average of the high and low selling prices per share of the Registrant’s common stock on March 14, 2024 as reported on the Nasdaq Global Select Market.
- (5) Estimated in accordance with Rules 457(c) and 457(h) solely for the purpose of calculating the registration fee. The offering price per share and the aggregate offering price are based upon \$1.84 which is the average of the high and low selling prices per share of the Registrant’s common stock on March 14, 2024 as reported on the Nasdaq Global Select Market multiplied by 85%, which is the percentage of the price per share applicable to purchases under the 2020 ESPP.