# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

### FORM S-1 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

## Taysha Gene Therapies, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 2836 (Primary Standard Industrial Classification Code Number) 84-3199512 (I.R.S. Employer Identification No.)

2280 Inwood Road Dallas, TX 75235 (214) 612-0000

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

RA Session II
President and Chief Executive Officer
Taysha Gene Therapies, Inc.
2280 Inwood Road
Dallas, TX 75235
(214) 612-0000

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

Copies to:

Divakar Gupta
Darren DeStefano
Brian F. Leaf
Madison A. Jones
Cooley LLP
55 Hudson Yards
New York, New York 10001
(212) 479-6000

Robert E. Puopolo Seo Salimi Goodwin Procter LLP 100 Northern Avenue Boston, Massachusetts 02210 (617) 570-1000

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, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. 

(333-248559)

|                                                                    |                                                                                                                                                                                                      | tive amendment filed pursuant to Rule 46 ber of the earlier effective registration sta                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | lowing box and list t                                                                                                                                                                                 | the Securities Act                                                                                                                                                                       |  |  |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|                                                                    |                                                                                                                                                                                                      | tive amendment filed pursuant to Rule 46 ber of the earlier effective registration sta                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | lowing box and list t                                                                                                                                                                                 | the Securities Act                                                                                                                                                                       |  |  |
| eme                                                                |                                                                                                                                                                                                      | ether the registrant is a large accelerated. See the definitions of "large accelerated the Exchange Act.                                                                                                                                                                                                                 |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                       |                                                                                                                                                                                          |  |  |
| Larg                                                               | ge Accelerated Filer                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Accelerated Fil                                                                                                                                                                                       | ler 🗆                                                                                                                                                                                    |  |  |
| Non                                                                | -Accelerated Filer                                                                                                                                                                                   | $\boxtimes$                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Smaller Report                                                                                                                                                                                        | ting Company 🗵                                                                                                                                                                           |  |  |
|                                                                    |                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Emerging Grov                                                                                                                                                                                         | wth Company 🗵                                                                                                                                                                            |  |  |
| CALCULATION OF REGISTRATION FEE  Proposed Proposed Maximum Maximum |                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                       |                                                                                                                                                                                          |  |  |
|                                                                    |                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                      | Maxîmum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Maximum                                                                                                                                                                                               |                                                                                                                                                                                          |  |  |
|                                                                    |                                                                                                                                                                                                      | ecurities Being Registered                                                                                                                                                                                                                                                                                               | Amount to be<br>Registered(1)                                                                                                                                                                                                        | Maximum<br>Aggregate Offering<br>Price Per Share                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Maximum<br>Aggregate<br>Offering Price                                                                                                                                                                | Amount of<br>Registration Fee(2)                                                                                                                                                         |  |  |
|                                                                    | nmon Stock, \$0.00001                                                                                                                                                                                | par value per share                                                                                                                                                                                                                                                                                                      | Registered(1)<br>1,484,208                                                                                                                                                                                                           | Maximum Aggregate Offering Price Per Share \$20.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Maximum<br>Aggregate<br>Offering Price<br>\$29,684,160                                                                                                                                                | Registration Fee(2)<br>\$3,853                                                                                                                                                           |  |  |
| Com (1) (2)                                                        | Represents only the a<br>underwriters' option<br>registered on the Reg<br>The registration fee is<br>aggregate offering pr<br>Statement on Form S<br>In accordance with R                            |                                                                                                                                                                                                                                                                                                                          | red and includes 193, ver-allotments, if any. o. 333-248559). (a) under the Securiti securities at an aggreg clared effective by the idditional amount of s                                                                          | Maximum Aggregate Offering Price Per Share \$20.00  592 shares of common Does not include the sees Act of 1933, as among ate offering price not be Securities and Exchalacturities having a proposition of the securities of the securities having a proposition of the securities have a proposition of the sec | Maximum Aggregate Offering Price \$29,684,160 In stock issuable upon securities that the Rej ended, based on the p to exceed \$151,315, nge Commission on bosed maximum agg                           | s3,853 n exercise of the gistrant previously proposed maximum 840 on a Registration September 23, 2020. regate offering price                                                            |  |  |
| (1) (2) This                                                       | Represents only the a<br>underwriters' option<br>registered on the Reg<br>The registration fee is<br>aggregate offering pr<br>Statement on Form S<br>In accordance with R<br>of \$20.00 is hereby re | par value per share additional number of shares being registe to purchase additional shares to cover ov gistration Statement on Form S-1 (File No s calculated in accordance with Rule 457 rice. The registrant previously registered 1-1 (File No. 333-248559), which was declade 462(b) under the Securities Act, an a | Registered(1) 1,484,208  red and includes 193, ver-allotments, if any. o. 333-248559). If (a) under the Securiti securities at an aggreg clared effective by the dditional amount of security amount of security and the exercise of | Maximum Aggregate Offering Price Per Share \$20.00  592 shares of common Does not include the sees Act of 1933, as amogate offering price not be Securities and Exchalacturities having a project the underwriters' option                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Maximum Aggregate Offering Price \$29,684,160 In stock issuable upon securities that the Repended, based on the parto exceed \$151,315, Inge Commission on cosed maximum aggree on to purchase additi | Registration Fee(2)<br>\$3,853<br>n exercise of the<br>gistrant previously<br>proposed maximum<br>840 on a Registration<br>September 23, 2020.<br>regate offering price<br>ional shares. |  |  |

### EXPLANATORY NOTE AND INCORPORATION OF CERTAIN INFORMATION 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 Taysha Gene Therapies, Inc. (the "Registrant") by 1,484,208 shares, 193,592 of which 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. 333-248559), 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 September 23, 2020, are incorporated by reference into this Registration Statement.

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

#### EXHIBIT INDEX

| Exhibit<br><u>Number</u> | Description                                                                                                                                                                                                        |  |  |  |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| 5.1                      | Opinion of Cooley LLP                                                                                                                                                                                              |  |  |  |
| 23.1                     | Consent of Deloitte & Touche LLP, independent registered public accounting firm                                                                                                                                    |  |  |  |
| 23.2                     | Consent of Cooley LLP (included in Exhibit 5.1)                                                                                                                                                                    |  |  |  |
| 24.1                     | Power of Attorney (included on the signature page of the Registration Statement on Form S-1 (File No. 333-248559), originally filed with the Commission on September 2, 2020 and incorporated herein by reference) |  |  |  |

#### **SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant 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 the 23rd day of September, 2020.

#### TAYSHA GENE THERAPIES, INC.

By: /s/ RA Session II

Name: RA Session II

Title: President and Chief Executive Officer

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.

| Name                                                  | Position                                                                      | Date               |  |
|-------------------------------------------------------|-------------------------------------------------------------------------------|--------------------|--|
| /s/ RA Session II<br>RA Session II                    | President, Chief Executive Officer and Director (Principal Executive Officer) | September 23, 2020 |  |
| /s/ Kamran Alam<br>Kamran Alam                        | Chief Financial Officer (Principal Financial and Accounting Officer)          | September 23, 2020 |  |
| * Phillip B. Donenberg                                | — Director                                                                    | September 23, 2020 |  |
| * Sean P. Nolan                                       | — Director                                                                    | September 23, 2020 |  |
| * Paul B. Manning                                     | — Director                                                                    | September 23, 2020 |  |
| * Sukumar Nagendran, M.D.                             | — Director                                                                    | September 23, 2020 |  |
| *By: /s/ RA Session II RA Session II Attorney-in-Fact | _                                                                             |                    |  |



Divakar Gupta T: +1 212 479 6474 dgupta@cooley.com

September 23, 2020

Taysha Gene Therapies, Inc. 2280 Inwood Road Dallas, Texas 75235

#### Ladies and Gentlemen:

We have acted as counsel to Taysha Gene Therapies, Inc., a Delaware corporation (the "Company"), in connection with the filing by the Company of a Registration Statement on Form S-1 (the "Registration Statement") with the Securities and Exchange Commission pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, covering an underwritten public offering of up to 1,484,208 shares of the Company's common stock, par value \$0.00001 ("Shares"). The Registration Statement incorporates by reference the registration statement on Form S-1 (No. 333-248559), which was declared effective on September 23, 2020 (the "Prior Registration Statement"), including the prospectus that is part of the Prior Registration Statement (the "Prospectus").

In connection with this opinion, we have (i) examined and relied upon (a) the Registration Statement and the Prospectus, (b) the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, each as currently in effect, (c) the forms of the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws filed as Exhibits 3.3 and 3.4, to the Registration Statement, respectively, each of which is to be in effect upon the closing of the offering contemplated by the Registration Statement and (d) originals or copies certified to our satisfaction of such records, documents, certificates, memoranda, opinions and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below and (ii) assumed that the Amended and Restated Certificate of Incorporation referred to in clause (i)(c) is filed with the Secretary of State of the State of Delaware before issuance of the Shares.

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.

Cooley LLP 55 Hudson Yards New York, NY 10001 t: (212) 479-6000 f: (212) 479-6275 cooley.com



Taysha Gene Therapies, Inc. September 23, 2020 Page Two

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued against payment therefor as described in the Registration Statement and the Prospectus, will be validly issued, fully paid and non-assessable.

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus included in the Prior Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement.

| Sincerely,            |  |  |
|-----------------------|--|--|
| Cooley LLP            |  |  |
| By: /s/ Divakar Gupta |  |  |
| Divakar Gupta         |  |  |

Cooley LLP 55 Hudson Yards New York, NY 10001 t: (212) 479-6000 f: (212) 479-6275 cooley.com

#### 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 July 31, 2020 (September 17, 2020 as to the effects of the stock split described in Note 9), relating to the financial statements of Taysha Gene Therapies, Inc. appearing in Registration Statement No. 333-248559 on Form S-1 of Taysha Gene Therapies, Inc. We also consent to the reference to us under the heading "Experts" in Registration Statement No. 333-248559 on Form S-1.

#### /s/ Deloitte & Touche LLP

Dallas, Texas

September 23, 2020