

Supplement dated March 30, 2022
To Prospectus Supplement dated October 14, 2021
To Prospectus dated October 14, 2021



\$150,000,000

Common Stock

This supplement (this "**Supplement**") supplements the prospectus supplement, dated October 14, 2021 (the "**Prospectus Supplement**"), relating to the offer and sale of shares of common stock, par value \$0.00001 per share, of Taysha Gene Therapies, Inc. (the "**Company**") having an aggregate offering price of up to \$150,000,000 from time to time through the Sales Agents. Sales of shares of our common stock under this prospectus, if any, may be made by any method deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended. This Supplement should be read in conjunction with the Prospectus Supplement. Capitalized terms used and not defined herein shall have the meanings ascribed to such terms in the Prospectus Supplement.

This Supplement is being filed to reflect the amendment of the Sales Agreement by and among the Company, SVB Securities LLC (f/k/a SVB Leerink LLC) and Wells Fargo Securities, LLC to include Goldman Sachs & Co. LLC as an additional Sales Agent. Accordingly, each reference to the term "Sales Agent" or "Sales Agents" in the Prospectus Supplement is hereby amended to include Goldman Sachs & Co. LLC .

Goldman Sachs & Co. LLC

Wells Fargo Securities

SVB Leerink