

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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): December 23, 2024

ATYR PHARMA, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-37378
(Commission File Number)

20-3435077
(IRS Employer
Identification No.)

10240 Sorrento Valley Road, Suite 300
San Diego, CA
(Address of Principal Executive Offices)

92121
(Zip Code)

Registrant's telephone number, including area code: (858) 731-8389

Not Applicable

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligations of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.001 per share	ATYR	The Nasdaq Capital Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934.

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 13(a) of the Exchange Act.

Item 1.01 Entry into a Material Definitive Agreement.

As previously reported, aTyr Pharma, Inc. (the “Company”) is a party to the Open Market Sale AgreementSM, dated April 22, 2022 (the “Sales Agreement”), between the Company and Jefferies LLC (“Jefferies”). Under the Sales Agreement, the Company may offer and sell, from time to time, through Jefferies as its sales agent or principal, shares of its common stock, par value \$0.001 per share (the “Common Stock”), having an aggregate offering amount of up to \$65.0 million (the “Initial Shares”). As of the date hereof, the Company has offered and sold Initial Shares with an aggregate offering amount of approximately \$65.0 million pursuant to the Sales Agreement.

On December 23, 2024, the Company and Jefferies entered into Amendment No. 1 to the Sales Agreement (“Amendment No. 1” and, together with the Sales Agreement, the “Amended Sales Agreement”) to provide for an increase in the aggregate offering amount under the Sales Agreement such that the Company may offer and sell additional shares of Common Stock having an aggregate offering up to, among other things, the amount registered by the Company pursuant to a prospectus supplement (such additional shares, the “Additional Shares” and, together with the “Initial Shares,” the “Shares”) under the Amended Sales Agreement. The terms and conditions of the Sales Agreement otherwise remain unchanged.

The Company is not obligated to sell any Shares under the Amended Sales Agreement. Subject to the terms and conditions of the Amended Sales Agreement, Jefferies will use commercially reasonable efforts, consistent with its normal sales and trading practices and applicable laws and regulations, to sell Shares from time to time based upon the Company’s instructions, including any price, time or size limits or other customary parameters or conditions the Company may specify, subject to certain limitations. Under the Amended Sales Agreement, Jefferies may sell Shares by any method permitted by law deemed to be an “at-the-market offering” as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended.

The issuance and sale, if any, of Shares under the Amended Sales Agreement will be made pursuant to the Company’s Registration Statement on Form S-3 (File No. 333-275455), filed with the Securities and Exchange Commission (the “SEC”) on November 9, 2023, or another effective registration statement as permitted by the Amended Sales Agreement. The offering of the Shares is described in the Company’s Prospectus dated November 20, 2023, as supplemented by a Prospectus Supplement dated December 23, 2024 and filed with the SEC on December 23, 2024. This Current Report on Form 8-K shall not constitute an offer to sell or the solicitation of an offer to buy any Shares under the Amended Sales Agreement nor shall there be any offer, solicitation or sale of such Shares in any state in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state.

Cooley LLP, counsel to the Company, has issued a legal opinion relating to the validity of the Additional Shares. A copy of such legal opinion, including the consent included therein, is filed as Exhibit 5.1 to this Current Report on Form 8-K and is incorporated herein by reference.

The foregoing description of the material terms of Amendment No. 1 is qualified in its entirety by reference to the full texts of (i) the Sales Agreement, a copy of which was filed as Exhibit 1.1 to the Company’s Current Report on Form 8-K filed with the SEC on April 22, 2022 and (ii) Amendment No. 1, which is attached as Exhibit 1.1 to this Current Report on Form 8-K, each of which is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
1.1	Amendment No. 1 to Open Market Sale Agreement, dated December 23, 2024, by and among aTyr Pharma, Inc. and Jefferies LLC.
5.1	Opinion of Cooley LLP.
23.1	Consent of Cooley LLP (included in Exhibit 5.1).
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ATYR PHARMA, INC.

By: /s/ Jill M. Broadfoot
Jill M. Broadfoot
Chief Financial Officer

Date: December 23, 2024

AMENDMENT NO. 1 TO THE OPEN MARKET SALE AGREEMENTSM

December 23, 2024

JEFFERIES LLC
520 Madison Avenue
New York, New York 10022

Ladies and Gentlemen:

This Amendment No. 1 to the Open Market Sale AgreementSM (this “**Amendment**”) is entered into as of the date first written above by aTyr Pharma, Inc., a Delaware corporation (the “**Company**”), and Jefferies LLC (the “**Agent**”), who are parties to that certain Open Market Sale AgreementSM, dated April 22, 2022 (the “**Original Agreement**”) relating to the offering of the Company’s Common Shares.

All capitalized terms not defined herein shall have the meanings ascribed to them in the Original Agreement.

The parties, intending to be legally bound, hereby amend the Original Agreement, as of the date hereof, as follows:

1. The first paragraph of the Original Agreement is hereby deleted in its entirety and replaced with the following:

“aTyr Pharma, Inc., a Delaware corporation (the “**Company**”), proposes, subject to the terms and conditions stated herein, to issue and sell from time to time through Jefferies LLC, as sales agent and/or principal (the “**Agent**”), shares of the Company’s common stock, par value \$0.001 per share (the “**Common Shares**”), on the terms set forth in this agreement (this “**Agreement**”).”

2. Notwithstanding anything to the contrary in Section 3(d) of the Original Agreement, the Company agrees to pay the fees and disbursements of Agent’s counsel in connection with the execution of this Amendment in an amount not to exceed \$50,000.

3. All references in the Original Agreement to the “Agreement” shall mean the Original Agreement as amended by this Amendment; *provided, however*, that all references to the “date of this Agreement” or the “date hereof” in the Original Agreement shall continue to refer to the date of the Original Agreement, unless otherwise amended herein and except with respect to the first paragraph of Section 2, Section 2(b) “Compliance with Registration Requirements,” Section 4(f) “Free Writing Prospectuses,” Section 4(p) “Legal Opinions,” Section 4(q) “Comfort Letter,” and Section 8(a) “Press Releases and Disclosure,” where references to the “date of this Agreement” or the “date hereof” in the Original Agreement shall refer to each of the date of the Original Agreement and the date of this Amendment.

The parties, intending to be legally bound, hereby further agree:

This Amendment has been duly authorized, executed and delivered by, and is a valid and binding agreement of, the Company, enforceable in accordance with its terms, except as the enforcement hereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles.

This Amendment and any claim, controversy or dispute arising under or related to this Amendment shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state. Any legal suit, action or proceeding arising out of or based upon this Amendment or the transactions contemplated hereby may be instituted in the federal courts of the United States of America located in the Borough of Manhattan in the City of New York or the courts of the State of New York in each case located in the Borough of Manhattan in the City of New York (collectively, the “**Specified Courts**”), and

each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court, as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party's address set forth in the Original Agreement, as amended by this Amendment, shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

The Original Agreement, as amended by this Amendment, supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Amendment may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit.

The invalidity or unenforceability of any section, paragraph or provision of this Amendment shall not affect the validity or enforceability of any other section, paragraph or provision hereof. If any section, paragraph or provision of this Amendment is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

This Amendment may be executed in counterparts, each of which shall be deemed an original, but all such respective counterparts shall together constitute one and the same instrument. This Amendment may be delivered by any party by facsimile, email or other electronic transmission.

[Remainder of Page Intentionally Blank]

JEFFERIES LLC

By: /s/ Michael Magarro
Name: Michael Magarro
Title: Managing Director

[Signature page to Amendment No. 1 to the Open Market Sale AgreementSM]

Charles J. Bair
T: +1 858 550 6142
cbair@cooley.com

December 23, 2024

aTyr Pharma, Inc.
10240 Sorrento Valley Road, Suite 300
San Diego, California 92121

Ladies and Gentlemen:

We have acted as counsel to aTyr Pharma, Inc., a Delaware corporation (the “**Company**”), in connection with the offering by the Company of shares of its common stock, par value \$0.001 per share (the “**Shares**”), have an aggregate offering price of up to \$150,000,000 pursuant to the Registration Statement on Form S-3 (No. 333-275455) (the “**Registration Statement**”) filed with the Securities and Exchange Commission (the “**Commission**”) under the Securities Act of 1933, as amended (the “**Securities Act**”), the prospectus included in the Registration Statement (the “**Base Prospectus**”) and the prospectus supplement filed with the Commission pursuant to Rule 424(b) under the Act (together with the Base Prospectus, the “**Prospectus**”). The Shares are to be sold by the Company in accordance with an Open Market Sale AgreementSM, dated April 22, 2022, as amended December 23, 2024, between the Company and Jefferies LLC (the “**Agreement**”), as described in the Prospectus.

In connection with this opinion, we have examined and relied upon (i) the Registration Statement and the Prospectus, (ii) the Agreement, (iii) the Company’s certificate of incorporation and bylaws, each as currently in effect, and (iv) such other records, documents, 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; and 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 by the Company where authorization, execution and delivery are a prerequisite 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.

We have assumed (i) that each sale of Shares will be duly authorized by the Board of Directors of the Company, a duly authorized committee thereof or a person or body pursuant to an authorization granted in accordance with Section 152 of the General Corporation Law of the State of Delaware (the “**DGCL**”), (ii) that no more than 30,000,000 Shares will be sold under the Agreement pursuant to the Prospectus and (iii) that the price at which the Shares are sold will equal or exceed the par value of the Shares. We express no opinion to the extent that future issuances of securities of the Company and/or anti-dilution adjustments to outstanding securities of the Company cause the number of shares of the Company’s common stock outstanding or committed to be issued to exceed the number of Shares then issuable under the Agreement.

Our opinion herein is expressed solely with respect to the DGCL. 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.



aTyr Pharma, Inc.
December 23, 2024
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On the basis of the foregoing, and in reliance thereon, and subject to the qualifications stated herein, we are of the opinion that the Shares, when sold and issued against payment therefor in accordance with the Agreement, the Registration Statement and the Prospectus, will be validly issued, fully paid and nonassessable.

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 letter to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

We consent to the reference to our firm under the heading "Legal Matters" in the Prospectus and to the filing of this opinion as an exhibit to the Company's Current Report on Form 8-K to be filed with the Commission for incorporation by reference into 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, or the rules and regulations of the Commission thereunder

Very truly yours,

Cooley LLP

By: /s/ Charles J. Bair
Charles J. Bair

