# 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): March 26, 2020**

# ATYR PHARMA, INC.

**(Exact name of registrant as specified in its charter)**

| **Delaware** | **001-37378** | **20-3435077** |
|---|---|---|
| **(State or other jurisdiction of incorporation)** | **(Commission File Number)** | **(IRS Employer Identification No.)** |

| | |
|---|---|
| **3545 John Hopkins Court, Suite #250 San Diego** | **92121** |
| **(Address of Principal Executive Offices)** | **(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 | LIFE | 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 2.02 Results of Operations and Financial Condition.**

On March 26, 2020, aTyr Pharma, Inc. announced financial results for the year ended December 31, 2019 in the earnings release attached hereto as Exhibit 99.1.

The information under this Item 2.02, including Exhibit 99.1 hereto is being furnished and shall not be deemed "filed" for the purposes of Section 18 of the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall such information be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended or the Exchange Act, except as expressly set forth by specific reference in such filing.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits.

| | |
|---|---|
| 99.1 | Press Release of aTyr Pharma, Inc. dated March 26, 2020. |

**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: March 26, 2020

**IMMEDIATE RELEASE**

**Contact:**
Joyce Allaire
Managing Director, LifeSci Advisors, LLC
jallaire@lifesciadvisors.com

## aTyr Pharma Announces Fourth Quarter and Full Year 2019 Results and Provides Corporate Update

*Company to host conference call and webcast today at 5:00 p.m. EDT / 2:00 p.m. PDT*

SAN DIEGO – March 26, 2020 – aTyr Pharma, Inc. (Nasdaq: LIFE), a biotherapeutics company engaged in the discovery and development of innovative medicines based on novel immunological pathways, today announced fourth quarter and full year 2019 results and provided a corporate update.

“2019 was a productive year for aTyr and we achieved some key milestones, including the announcement of interim safety data results for our ongoing ATYR1923 Phase 1b/2a clinical trial for patients with pulmonary sarcoidosis. We also recently entered into a licensing collaboration with Kyorin Pharmaceutical Co., Ltd. (Kyorin) and received an $8.0 million upfront payment. Including our efforts related to neuropilin-2 (NRP2) receptor biology, we believe these milestones represent significant advancements of our pipeline” said Dr. Sanjay S. Shukla, M.D., M.S., president and chief executive officer of aTyr.

“As the COVID-19 pandemic continues to impact daily life, we remain committed to the safety of our employees as well as our physician partners and the patients who are participating in our ATYR1923 Phase 1b/2a clinical study. This global public health crisis has been challenging for clinical trial conduct worldwide, and we now anticipate there will be a delay in topline results from our study, which were previously anticipated in the third quarter of this year. We are working closely with our investigators to implement procedures which will allow for rapid completion of this study when the demand on the health system eases.”

“Importantly, the successful licensing deal and public offering that we completed in 2020, together with cash on hand, provide critical resources that we believe will comfortably allow us to reach significant and potentially value creating milestones. We remain committed to completion of our Phase 1b/2a study as expeditiously as possible as we work to introduce an entirely new class of therapeutics to treat unmet needs in interstitial lung diseases (ILDs).”

**2019 and Subsequent Period Highlights and Upcoming Milestones**

- Announced the results of a pre-planned, blinded interim analysis of safety and tolerability, the primary endpoint of its ongoing Phase 1b/2a clinical trial of its lead therapeutic candidate, ATYR1923, in patients with pulmonary sarcoidosis. Interim safety data results announced were from 15 pulmonary sarcoidosis patients who had received a minimum of one dose of blinded study drug (ATYR1923 or placebo). Study drug (ATYR1923 or placebo) was observed to be generally safe and well tolerated with no drug-related serious adverse events, consistent with our Phase 1 study results in healthy volunteers. Adverse events were mostly mild or moderate in severity and assessed by the study investigators as unrelated to study drug.
- Entered into a collaboration and license agreement with Kyorin for the development and commercialization of ATYR1923 for ILDs in Japan (the Kyorin Agreement). aTyr received an $8 million upfront payment and is eligible to receive up to an additional $167 million in the aggregate upon achievement of certain development, regulatory and sales milestones, as well as tiered royalties on net sales in Japan.
- Announced the appointment of Arthur M. Mercurio, Ph.D. as a scientific advisor to the company. aTyr's abstract, "Domain-specific antibodies to Neuropilin-2 implicate VEGF-C and not Semaphorin 3F in breast cancer stem cell function" was accepted by the American Association for Cancer Research for a poster session at its Annual Meeting, and was completed in conjunction with Dr. Mercurio's lab at the Department of Molecular, Cell and Cancer Biology at the University of Massachusetts Medical School.
- Published "Serum-circulating His-tRNA synthetase inhibits organ-targeted immune responses," in the Nature journal *Cellular and Molecular Immunology* highlighting the essential role that histidyl tRNA synthetase (HARS) plays in the modulation of immune cell engagement in a broad range of disease states, including ILDs.
- Earlier this week, announced its Hong Kong subsidiary, Pangu BioPharma Limited (Pangu), together with the Hong Kong University of Science and Technology (HKUST), has been awarded a grant of approximately $750,000 to build a high-throughput platform for the development of bi-specific antibodies. This grant will help further support the company's NRP2 antibody development program.
- Raised gross proceeds of $20.7 million through the issuance of 4,870,588 shares of common stock in early 2020 from a public offering of common stock and the full exercise of the underwriters' over-allotment option.
- In March 2019, entered into a research and option agreement with global biotherapeutics leader CSL Behring to identify up to four new IND candidates from aTyr's tRNA synthetase pipeline (the CSL Agreement). aTyr is eligible to receive $4.25 million per synthetase, or up to $17 million in potential total option fees from the collaboration if all four synthetase advance.

**Fourth Quarter 2019 Financial Results**

Total revenues were $0.1 million for the three months ended December 31, 2019, representing collaboration revenue from the CSL Agreement. Research and development expenses were consistent between quarters at $3.6 million and $3.5 million for the three months ended December 31, 2019 and 2018, respectively. General and administrative expenses were also consistent between quarters at $2.5 million and $2.4 million for the three months ended December 31, 2019 and 2018, respectively.

**Year Ended December 31, 2019 Financial Results and Cash Position**

Total revenues were $0.4 million for the year ended December 31, 2019, consisting of collaboration revenue from the CSL Agreement. Research and development expenses were $14.0 million and $20.4 million for the years ended December 31, 2019 and 2018, respectively. The decrease of $6.4 million was due primarily to a $2.8 million decrease in personnel associated costs mainly as a result of a reduction in force initiated in May 2018, a decrease of $1.7 million in costs associated with our research collaboration with The Scripps Research Institute which we terminated effective November 2018, a $1.7 million decrease in preclinical research and development expenses and a decrease of $0.7 million related to lower product manufacturing costs. The decrease was offset in part by an increase of $0.7 million related to our ATYR1923 Phase 1b/2a clinical trial.

General and administrative expenses were $9.4 million and $12.4 million for the years ended December 31, 2019 and 2018, respectively. The decrease of $3.0 million was due primarily to a $2.2 million decrease in personnel associated costs mainly as a result of the May 2018 reduction in force, and a $0.8 million decrease in professional fees.

As of December 31, 2019, aTyr had $31.1 million in cash, cash equivalents and investments. Subsequent to the end of the year, the company received an $8.0 million upfront payment in connection with the Kyorin Agreement and gross proceeds of $20.7 million from the public offering of common stock, resulting in an estimated $50 million in cash, cash equivalents and investments at the end of the first quarter of 2020. As of December 31, 2019, aTyr had $8.7 million in long-term loans. aTyr plans to retire its debt in November and anticipates exiting 2020 with over $20 million in cash, cash equivalents and investments.

**Conference Call and Webcast Details**

aTyr Pharma will host a conference call and webcast today at 5:00 p.m. Eastern Time / 2:00 p.m. Pacific Time to discuss its financial results and provide a corporate update. Interested parties may access the call by dialing toll-free 844-358-9116 from the US, or 209-905-5951 internationally and using conference ID 1668357. Links to a live audio webcast and replay may be accessed on the aTyr website events page at: http://investors.atyrpharma.com/events-and-webcasts. An audio replay will be available for at least 90 days following the event.

**About ATYR1923**

aTyr is developing ATYR1923 as a potential therapeutic for patients with interstitial lung diseases. ATYR1923, a fusion protein comprised of the immuno-modulatory domain of histidyl tRNA synthetase fused to the FC region of a human antibody, is a selective modulator of neuropilin-2 that downregulates the innate and adaptive immune response in inflammatory disease states. aTyr is currently enrolling a proof-of-concept Phase 1b/2a trial evaluating ATYR1923 in patients with pulmonary sarcoidosis. This Phase 1b/2a study is a multi-ascending dose, placebo-controlled, first-in-patient study of ATYR1923 that has been designed to evaluate the safety, tolerability, steroid sparing effect, immunogenicity and pharmacokinetics profile of multiple doses of ATYR1923.

**About NRP2**

Neuropilin-2 (NRP2) is a cell surface receptor that plays a key role in lymphatic development and in regulating inflammatory responses. In many forms of cancer, high NRP2 expression is associated with worse outcomes. NRP2 can interact with multiple ligands and co-receptors through distinct domains to influence their functional roles, making it a potential drug target with multiple distinct therapeutic applications. NRP2 interacts with type 3 semaphorins and plexins to impact inflammation and with forms of vascular endothelial growth factor (VEGF) and their receptors, to impact lymphangiogenesis. In addition, NRP2 modulates interactions between CCL21 and CCR7 potentially impacting homing of dendritic cells to lymphoid organs. aTyr is currently investigating NRP2 receptor biology, both internally and in collaboration with key academic thought leaders, as a novel target for new product candidates for a variety of diseases, including cancer and inflammation.

**About aTyr**

aTyr is a biotherapeutics company engaged in the discovery and development of innovative medicines based on novel immunological pathways. aTyr's research and development efforts are concentrated on a newly discovered area of biology, the extracellular functionality and signaling pathways of tRNA synthetases. aTyr has built a global intellectual property estate directed to a potential pipeline of protein compositions derived from 20 tRNA synthetase genes and their extracellular targets. aTyr's primary focus is ATYR1923, a clinical-stage product candidate which binds to the neuropilin-2 receptor and is designed to down-regulate immune engagement in interstitial lung diseases. For more information, please visit http://www.atyrpharma.com.

**Forward-Looking Statements**

This press release contains forward-looking statements within the meaning of the Private Litigation Reform Act. Forward-looking statements are usually identified by the use of words such as “anticipates,” “believes,” “estimates,” “expects,” “intends,” “may,” “plans,” “projects,” “seeks,” “should,” “will,” and variations of such words or similar expressions. We intend these forward-looking statements to be covered by such safe harbor provisions for forward-looking statements and are making this statement for purposes of complying with those safe harbor provisions. These forward-looking statements, include statements regarding the potential therapeutic benefits

and applications of our product candidates; our ability to successfully advance our product candidates, undertake certain development activities (such as the initiation of clinical trials, clinical trial enrollment, the conduct of clinical trials and the announcement of top-line results) and accomplish certain development goals, and the timing of such events; the potential benefits of our collaborations with Kyorin and CSL; and our estimated cash, cash equivalents and investments balance at the end of the first quarter 2020 and full year 2020. These forward-looking statements also reflect our current views about our plans, intentions, expectations, strategies and prospects, which are based on the information currently available to us and on assumptions we have made. Although we believe that our plans, intentions, expectations, strategies and prospects, as reflected in or suggested by these forward-looking statements, are reasonable, we can give no assurance that the plans, intentions, expectations or strategies will be attained or achieved. All forward-looking statements are based on estimates and assumptions by our management that, although we believe to be reasonable, are inherently uncertain. Furthermore, actual results may differ materially from those described in these forward-looking statements and will be affected by a variety of risks and factors that are beyond our control including, without limitation, risks associated with the discovery, development and regulation of our product candidates, the risk that we may cease or delay preclinical or clinical development activities for any of our existing or future product candidates for a variety of reasons (including difficulties or delays in patient enrollment in planned clinical trials), the fact that our collaborations with Kyorin and CSL are subject to early termination in certain circumstances, the possibility of unexpected expenses or other demands on our cash resources, risks associated with the COVID-19 pandemic, and the risk that we may not be able to raise the additional funding required for our business and product development plans, as well as those risks set forth in our most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and in our other SEC filings. Except as required by law, we assume no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

**ATYR PHARMA INC.**
**Condensed Consolidated Statements of Operations**
(in thousands, except share and per share data)

| | Three Months Ended December 31, | | Years Ended December 31, | |
|---|---|---|---|---|
| | 2019 | 2018 | 2019 | 2018 |
| | (unaudited) | | | |
| Revenues: | | | | |
| Collaboration revenue | $ 144 | $ — | $ 422 | $ — |
| Total revenues | 144 | — | 422 | — |
| Operating expenses: | | | | |
| Research and development | 3,590 | 3,549 | 14,048 | 20,385 |
| General and administrative | 2,516 | 2,414 | 9,352 | 12,435 |
| Total operating expenses | 6,106 | 5,963 | 23,400 | 32,820 |
| Loss from operations | (5,962) | (5,963) | (22,978) | (32,820) |
| Total other expense, net | (171) | (359) | (785) | (1,695) |
| Consolidated net loss | $ (6,133) | $ (6,322) | $ (23,763) | $ (34,515) |
| Net loss attributable to noncontrolling interest in Pangu BioPharma Limited | 160 | — | 160 | — |
| Net loss attributable to aTyr Pharma, Inc. | $ (5,973) | $ (6,322) | $ (23,603) | $ (34,515) |
| Net loss per share attributable to common stockholders, basic and diluted | $ (1.54) | $ (2.92) | $ (7.03) | $ (16.11) |
| Weighted average common stock shares outstanding, basic and diluted | 3,891,002 | 2,168,388 | 3,355,600 | 2,141,961 |

**ATYR PHARMA INC.**
**Condensed Consolidated Balance Sheets**
(in thousands)

| | December 31, 2019 | December 31, 2018 |
|---|---|---|
| Cash, cash equivalents and available-for-sale investments | $ 31,144 | $ 49,545 |
| Other assets | 953 | 1,348 |
| Property and equipment, net | 1,270 | 1,853 |
| Right-of-use assets | 2,821 | — |
| Total assets | $ 36,188 | $ 52,746 |
| | | |
| Accounts payable, accrued expenses and other liabilities | $ 3,431 | $ 3,066 |
| Current portion of operating lease liability | 755 | — |
| Long-term operating lease liability, net of current portion | 2,239 | — |
| Current portion of long-term debt, net of debt issuance costs and discount | 8,737 | 7,767 |
| Long-term debt, net of current portion and debt issuance costs and discount | — | 8,263 |
| Stockholders' equity | 21,026 | 33,650 |
| Total liabilities and stockholders' equity | $ 36,188 | $ 52,746 |