aTyr Pharma Announces First Quarter 2019 Results and Provides Corporate Update

May 13, 2019

Phase 1b/2a proof-of-concept clinical trial of ATYR1923 in pulmonary sarcoidosis patients ongoing

Advanced lead position in Neuropilin-2 (NRP-2) biology with inaugural NRP-2 summit

Company to host conference call and webcast today at 5:00pm EDT / 2:00 PDT

SAN DIEGO, May 13, 2019 (GLOBE NEWSWIRE) -- aTyr Pharma, Inc. (Nasdaq: LIFE), a biotherapeutics company engaged in the discovery and development of innovative medicines based on novel immunological pathways, today announced first quarter 2019 results and provided a corporate update.

“During the first quarter, we continued to execute on our Phase 1b/2a study of our lead therapeutic candidate, ATYR1923, a selective NRP-2 inhibitor, in patients with pulmonary sarcoidosis, and we look forward to reporting interim results in the fourth quarter of this year,” said Dr. Sanjay Shukla, President and Chief Executive Officer of aTyr. “At the same time, we continued to advance our understanding of the emerging role of NRP-2 in the modulation of immune responses. We recently held an inaugural summit meeting of leading experts in the field of NRP-2 biology to discuss the down-regulation of the innate and adaptive immune systems and potential clinical utility across a broad range of inflammatory disease states.”

First Quarter 2019 and Subsequent Period Highlights

- Advanced its ongoing Phase 1b/2a clinical trial of ATYR1923 in pulmonary sarcoidosis patients, with interim data expected during the fourth quarter of this year.
- Hosted an inaugural Neuropilin-2 (NRP-2) Summit Meeting featuring key researchers from the United States and Europe to discuss the most recent discoveries relating to the development of therapeutics directed to the NRP-2 co-receptor, and related signaling pathways.
- Closed a $5 million registered direct investment led by Federated Kaufmann Small Cap Fund.
- Announced a research collaboration and option agreement with global biotherapeutics leader CSL Behring to accelerate development of product candidates derived from up to four tRNA synthetases from aTyr’s preclinical pipeline.

Research Highlights

- Announced an upcoming poster presentation at the American Thoracic Society 2019 International Conference, which is being held May 19-22 in Dallas. The poster will describe preclinical findings from a study of ATYR1923 in murine models of interstitial lung diseases (ILDs), including sclerodermatous chronic graft-versus-host disease (scl cGvHD), Saccharopolyspora rectivirgula-induced chronic hypersensitivity pneumonitis (CHP), propionibacterium acnes-induced pulmonary granulomatosis (sarcoidosis) and rheumatoid arthritis-associated interstitial lung disease (RA-ILD). ATYR1923 treatment significantly decreased both skin and lung fibrosis in the scl cGvHD model, and it also reduced lung protein levels of several fibrosis-related cytokines or chemokines in the highly inflammatory experimental CHP and sarcoidosis models.
- Presented a poster at the 2019 American Association for Cancer Research (AACR) summarizing recent data from the Company’s collaboration and ongoing pilot study with the University of Nebraska Medical Center aimed at advancing NRP-2 biology and exploring potential therapeutic opportunities for ATYR1923. The pilot study was led by Dr. Kaustubh Datta, a recognized expert in the field of NRP-2 biology.
- Presented preclinical data at Keystone Symposia 2019 Conference in February demonstrating, for the first time, ATYR1923’s ability to bind to NRP-2 and down-regulate myeloid cells, specifically neutrophils, during lung inflammation. These findings help support aTyr’s belief in the mechanism of action of ATYR1923 to suppress immune engagement in pulmonary sarcoidosis as well as other interstitial lung diseases.

First Quarter 2019 Financial Results and Cash Position

Research and development expenses were $3.3 million and $6.2 million for the three months ended March 31, 2019 and 2018, respectively. General

and administrative expenses were $2.5 million and $4.1 million for the three months ended March 31, 2019 and 2018, respectively. The decreases for both research and development expenses and general and administrative expenses were primarily related to the Company's corporate restructuring announced in May 2018, where aTyr announced its focused development efforts on the clinical advancement of ATYR1923 along with related reductions in headcount and personnel-related costs and other cost saving measures.

As of March 31, 2019, aTyr had $43.0 million in cash, cash equivalents and investments. Subsequent to the end of the quarter, the Company raised $5.0 million in gross proceeds through a registered direct investment led by Federated Kaufmann Small Cap Fund.

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 4868007. 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 (HARS) 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 initiated a proof-of-concept Phase 1b/2a trial evaluating ATYR1923 in patients with pulmonary sarcoidosis in the fourth quarter of 2018. 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 (PK) profile of multiple doses of ATYR1923. For the Phase 1b/2a trial, aTyr is collaborating with the Foundation for Sarcoidosis Research (FSR), the nation's leading nonprofit organization dedicated to finding a cure for sarcoidosis and improving care for sarcoidosis patients. Under the terms of the collaboration, FSR will assist with clinical trial site initiation and patient enrollment.

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 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. aTyr is focused on the therapeutic translation of the Resokine pathway, comprised of extracellular proteins derived from the histidyl tRNA synthetase gene family. ATYR1923 is a clinical-stage product candidate which binds to the neuropilin-2 receptor and is designed to down-regulate immune engagement in interstitial lung diseases and other immune-mediated 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, including statements regarding our projected cash expenditures, 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; and the scope and strength of our intellectual property portfolio. 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 current and planned clinical trials), 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 March 31,	
	2019	**2018**
	(unaudited)	
Operating expenses:		
Research and development	$ 3,345	$ 6,150
General and administrative	2,532	4,070
Total operating expenses	5,877	10,220
Loss from operations	(5,877)	(10,220)
Total other expense, net	(260)	(447)
Net loss	$ (6,137)	$ (10,667)

Net loss per share attributable to common stock holders, basic and diluted	$ (0.18)	$ (0.36)
Weighted average common stock shares outstanding, basic and diluted	33,823,909	29,795,466

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

	March 31, 2019 (unaudited)	**December 31, 2018**
Cash, cash equivalents and available-for-sale investments	$ 43,019	$ 49,545
Other assets	1,881	1,348
Property and equipment, net	1,692	1,853
Right-of-use assets	3,323	—
Total assets	$ 49,915	$ 52,746
Accounts payable, accrued expenses and other liabilities	$ 2,703	$ 3,066
Current portion of operating lease liability	681	—
Current portion of long-term debt, net of issuance costs and discount	7,791	7,767
Long-term operating lease liability, net of current portion	2,815	—
Long-term debt, net of current portion and issuance costs and discount	6,440	8,263
Stockholders' equity	29,485	33,650
Total liabilities and stockholders' equity	$ 49,915	$ 52,746

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Source: aTyr Pharma, Inc.