Zacks Small-Cap Research
Sponsored – Impartial - Comprehensive

March 3, 2022
David Bautz, PhD
312-265-9471
dbautz@zacks.com

scr.zacks.com
10 S. Riverside Plaza, Chicago, IL 60606

Appili Therapeutics Inc. (T.APL-TSX)

T.APL: U.S. DoD to Provide Over US$10 Million in Funding for ATI-1701…

Based on our probability adjusted DCF model that takes into account potential future revenues of ATI-2307, ATI-1701, and ATI-1501 APLI.T is valued at CAD$1.00/share. This model is highly dependent upon continued clinical success of the company's pipeline and will be adjusted accordingly based on future clinical results.

Current Price (03/03/22)	CAD$0.13
Valuation	**CAD$1.00**

OUTLOOK

On February 28, 2022, Appili Therapeutics Inc. (APLI.T) announced that the U.S. Department of Defense (DoD), via the Joint Science and Technology Office of the Defense Threat Reduction Agency (DTRA), will provide >US$10 million to advance ATI-1701, Appili's biodefense vaccine candidate, to IND submission. This funding will replace and expand the previous contract that was awarded to Appili's development partners and Appili will now serve as the prime contractor. Activities included in the new contract will include regulatory, nonclinical, and manufacturing to support an IND submission to the FDA. The expected total funding is >US$10 million, however the final funding amount will be determined following negotiations between DTRA and Appili.

SUMMARY DATA

52-Week High	**$1.31**
52-Week Low	**$0.09**
One-Year Return (%)	**-87.50**
Beta	**1.18**
Average Daily Volume (sh)	**308,820**
Shares Outstanding (mil)	**71**
Market Capitalization ($mil)	**$9**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**20**
Insider Ownership (%)	**33**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2019 Estimate	**N/A**
P/E using 2020 Estimate	**N/A**

Risk Level	**High**
Type of Stock	**Small-Blend**
Industry	**Med-Biomed/Gene**

ZACKS ESTIMATES

Revenue
(in millions of CAD$)

	Q1 (Jun)	Q2 (Sep)	Q3 (Dec)	Q4 (Mar)	Year (Mar)
2021	0.0 A	0.0 A	0.0 A	0.0 A	0.1 A
2022	0.0 A	0.0 A	1.4 A	0.0 E	1.4 E
2023					0.0 E
2024					0.0 E

Earnings per Share
(in CAD$)

	Q1 (Jun)	Q2 (Sep)	Q3 (Dec)	Q4 (Mar)	Year (Mar)
2021	-$0.05 A	-$0.04 A	-$0.07 A	-$0.08 A	-$0.24 A
2022	-$0.12 A	-$0.18 A	-$0.05 A	-$0.10 E	-$0.43 E
2023					-$0.25 E
2024					-$0.20 E

© Copyright 2022, Zacks Investment Research. All Rights Reserved.

WHAT'S NEW

Business Update

Appili Awarded >US$10 Million Contract for ATI-1701

On February 28, 2022, Appili Therapeutics Inc. (APLI.TO) announced that the U.S. Department of Defense (DoD), via the Joint Science and Technology Office of the Defense Threat Reduction Agency (DTRA), has awarded the company a contract worth >US$10 million for the continued development of ATI-1701, the company's biodefense vaccine for the prevention of tularemia.

This new contract will replace and expand upon the previous contract to support the advanced development and manufacturing of ATI-1701 that had been awarded to one of Appili's development partners. Appili will now serve as the prime contractor, with covered activities including regulatory, nonclinical, and manufacturing to support an IND submission to the FDA. The expected amount of the contract is >US$10 million, however the total funding amount will be determined following negotiations between Appili and the DTRA.

ATI-1701 is a vaccine for the prevention of tularemia caused by *Francisella tularensis*, a pathogen that is a Tier 1 biological threat agent according to the CDC (Dennis *et al*., 2001). Its potential as a bioterror agent is based on the fact that only a very small number of *F. tularensis* cells (10-50) can cause disease and the organism can be aerosolized to infect a large area. Inhalation of *F. tularensis* and development of pneumonic tularemia can lead to breathing difficulties and ultimately be fatal if not treated. Based on its highly infectious nature and ability to cause severe illness, the U.S. government and other governments around the world have made medical countermeasures against *F. tularensis* a high biodefense priority.

Since it is unacceptable to test the efficacy of a tularemia vaccine in a human population, ATI-1701 is being developed via the FDA Animal Rule. Products developed via this pathway are required to show efficacy in two animal models, one of which being a non-human primate, along with safety in a healthy adult population.

Appili previously presented data showing that ATI-1701 protected 100% of rats for 365 days and cynomolgus macaques for 90 days following immunization. This was tested by challenging vaccinated animals with aerosolized *F. tularesnsis*, which resulted in 100% fatality in non-vaccinated rats, rats immunized with the legacy *F. tularensis* vaccine, and non-vaccinated macaques. The company also recently announced positive one-year challenge results with non-human primates showing a survival rate of 29% (2/7) in the ATI-1701 vaccinated cohort compared to 0% (0/5) in placebo vaccinated controls.

Since it is being developed as a medical countermeasure, ATI-1701 would qualify for a priority review voucher (PRV) upon its approval. A PRV allows the holder of the voucher to receive an expedited six-month review from the FDA for a new drug application (NDA) or biologics license application (BLA) instead of the usual ten-month review. PRVs are fully transferrable and have sold consistently for the previous couple of years for approximately $100 million each.

Phase 2 Clinical Trial for ATI-2307 to Initiate 2H22

In November 2019, Appili acquired ATI-2307 from FUJIFILM Toyama Chemical Co., LTD. It is a broad-spectrum, novel arylamidine antifungal agent that belongs to the same class of aromatic diamidines as pentamidine and furamidine (Mitsuyama *et al*., 2008). It has a highly differentiated novel mechanism of action that could potentially be used to treat infections caused by a number of clinically important and high priority pathogens, including *Cryptococcus*, *Candida*, and *Aspergillus*.

ATI-2307 has been successfully tested in multiple Phase 1 clinical trials. In addition, the compound has been tested in 80 human subjects in three single ascending dose and/or multiple ascending dose clinical studies conducted in the U.S. in which it was safe and well tolerated at all doses tested.

Appili is currently conducting proof of concept nonclinical studies to evaluate the therapeutic effect of ATI-2307 in rabbit and mouse intracranial *Cryptococcus* infection models and earlier this year published the results of studies evaluating the drugs activity *in vitro* against a panel of clinical isolates (Gerlach *et al*., 2021). The work is being conducted in collaboration with researchers at Duke University and the University of Texas Health Science Center at San Antonio. A portion of the work is being supported by the U.S. National Institute of Allergy and Infectious Diseases (NIAID).

In addition, the company is conducting pharmacokinetic/pharmacodynamic (PK/PD) studies to inform the Phase 2 trial design and dosing. Appili has transferred the analytical methods and manufacturing process for ATI-2307 to a contract manufacturing organization and expects GMP production of clinical trial material to complete in the second half of 2022. The company has also initiate clinical and regulatory activities in preparation for the Phase 2 clinical trial to initiate before the end of 2022.

Appili is also evaluating the potential for ATI-2307 as a treatment for invasive *Candida* infections. These infections are caused by a number of *Candida* species, including *Candida albicans* and the newly emerging pathogen *Candida auris*, and are generally treated with an echinocandin or azole. However, an increase in antifungal resistance is decreasing the efficacy of those compounds, and with the highly toxic amphotericin B used for refractory *Candida* infections, there exists the need for safer and more effective treatment options.

ATI-2307 may be eligible for development under the Limited Population Pathway for Antibacterial and Antifungal Drugs (LPAD), which provides a mechanism for accelerated clinical development for antibiotics and antifungals. In addition, ATI-2307 could be eligible for Orphan Drug Designation (ODD) from the FDA if developed as a treatment for cryptococcal meningitis or invasive candidiasis. ODD designation is accompanied by seven years of regulatory exclusivity following FDA approval. ATI-2307 may also be eligible for an additional five years of exclusivity if approved to treat either *Candida* or *Cryptococcus* as both those are qualifying pathogens for Qualified Infectious Disease Product (QIDP) designation. Lastly, the drug may be eligible for a tropical disease Priority Review Voucher (PRV) if it is the first compound approved for cryptococcal meningitis.

ATI-1503 Update

The ATI-1503 program is devoted to developing antibiotic compounds that target Gram-negative bacteria, including CDC priority pathogens such as *Enterobacteriaceae*, *Acinetobacter*, and *Pseudomonas*. The program is based off of negamycin, a naturally occurring compound that shows activity against Gram-negative bacteria.

Negamycin was originally isolated from cultures of *Streptomyces purpeofuscus* where it showed activity in immunocompetent mouse models of sepsis caused by Gram-negative pathogens such as *P. aeruginosa* and *Klebsiella Pneumoniae* (Hamada *et al*., 1970). It exerts its antibiotic effect by targeting protein synthesis (Mizuno *et al*., 1970). Negamycin has a number of positive attributes, however the compound itself is not potent enough for development as an antibiotic, with minimum inhibitor concentration (MIC) values of 16-64 μg/mL. To improve upon its characteristics, researchers at AstraZeneca produced analogues of negamycin and a lead compound was identified that showed 4-fold improvement in MIC against a panel of 100 clinical isolates of *P. aeruginosa* (McKinney *et al*., 2015).

Appili has identified two novel and structurally distinct lead molecules based on the negamycin scaffold, which each have low, single-digit MIC values against many Gram-negative bacteria. In addition, these compounds have shown *in vivo* proof-of-concept against *Klebsiella* and *Escherichia*. The compounds are continuing to be evaluated in multiple in vivo efficacy models, safety screening, and pharmacokinetic evaluations.

ATI-1501 Update

ATI-1501 is a taste-masked liquid oral suspension formulation of the antibiotic metronidazole. This was the company's initial R&D program initiated in the first quarter of 2015. Metronidazole is an antibiotic used to treat various protozoan and anaerobic bacterial infections, including giardiasis, trichomoniasis, and amebiasis (Freeman *et al*., 1997). It is a widely used antibiotic, with more than 10 million oral prescriptions written each year (IQVIA™ 2017).

In December 2019, Appili announced a commercial agreement with Saptalis Pharmaceuticals for ATI-1501, in which Appili will be eligible to receive multiple milestones and royalty payments based on the sale of ATI-1501 in the U.S. Saptalis will be responsible for overseeing the regulatory review, manufacturing, and preparation for the anticipated commercialization of ATI-1501 in the U.S. We anticipate an NDA being filed in 2022.

The commercial agreement was recently amended to expand the territories that Saptalis will commercialize ATI-1501 to include Europe and Latin America. Saptalis will be responsible for all development and commercialization efforts in those two regions and Appili will be eligible to receive royalties on sales.

Financial Update

On February 14, 2022, Appili announced financial results for the third quarter of fiscal year 2022, which ended September 30, 2021. The company reported CAD$1.4 million in revenue due to a US$1 million data licensing fee received from Fujifilm Toyama Chemical Co. (FFTC) so that FFTC would have access to the data from the PRESECO trial and CAD$0.1 million in other licensing fees. There were no licensing fees received in the third quarter of fiscal year 2021.

R&D expenses for the third quarter of fiscal year 2022 were CAD$3.3 million, compared to CAD$3.4 million for the third quarter of fiscal year 2021. The decrease was primarily due to decreased costs associated with the favipiravir clinical trials, the ATI-1503 program, and the ATI-1501 program partially offset by increases in salaries, increased costs for the ATI-1701 program, and increased stock-based compensation. G&A expenses for the third quarter of fiscal year 2022 were CAD$1.2 million, compared to CAD$1.1 million for the third quarter of fiscal year 2021. The increase was primarily due to increased stock-based compensation.

As of December 31, 2021, Appili had approximately CAD$9.4 million in cash and cash equivalents along with approximately US$2.2 million remaining on the PRMRP government grant and approximately US$1.62 million remaining on the DTRA grant. We estimate the company has sufficient funding through the third quarter of calendar 2022. As of Februrary 14, 2022, Appili had approximately 71.3 million shares outstanding and, when factoring in stock options and warrants, a fully diluted share count of approximately 102.1 million.

Conclusion

The new contract to support ATI-1701 is great news and will help to support its development through the IND submission to the FDA. We look forward to updates from the company on the continued development of ATI-1701, as well as ATI-2307 as the company gets closer to initiating a Phase 2 clinical trial in the second half of 2022. We’re glad to see an expansion of the agreement with Saptalis and we look forward to updates when the NDA is submitted later this year. With no changes to our model, our valuation remains at CAD$1.00.

PROJECTED FINANCIALS

Appili Therapeutics Inc. Fiscal Year Ends Mar. 31 / in Canadian dollars	FY2021 A	Q1FY22 A	Q2FY22 A	Q3FY22 A	Q4FY22 E	FY2022 E	FY2023 E	FY2024 E
ATI-2307	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
ATI-1701	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
ATI-1503	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
ATI-1501	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Other Income	$0.1	$0.0	$0.0	$1.4	$0.0	$1.4	$0.0	$0.0
Total Revenues	**$0.1**	**$0.0**	**$0.0**	**$1.4**	**$0.0**	**$1.4**	**$0.0**	**$0.0**
Cost of Sales	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Product Gross Margin	-	-	-	-	-	-	-	-
Research & Development	$10.2	$6.1	$10.0	$3.3	$5.0	$24.4	$18.0	$19.0
General & Administrative	$4.8	$1.1	$1.1	$1.2	$1.6	$5.0	$6.0	$6.3
Business Development	$0.7	$0.4	$0.2	$0.1	$0.2	$0.9	$0.9	$1.0
Other (Income) Expense	($1.2)	($0.2)	($0.2)	$0.0	$0.0	($0.4)	$0.0	$0.0
Operating Income	($14.3)	($7.3)	($11.2)	($3.2)	($6.8)	($28.6)	($24.9)	($26.3)
Operating Margin	-	-	-	-	-	-	-	-
Non-Operating Expenses (Net)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Pre-Tax Income	($14.3)	($7.3)	($11.2)	($3.2)	($6.8)	($28.5)	($24.9)	($26.3)
Income Taxes	$0.0	$0.0	$0.0	$0.0	$0.0	$0	$0	$0
Tax Rate	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Net Income	**($14.3)**	**($7.4)**	**($11.2)**	**($3.2)**	**($6.8)**	**($28.6)**	**($24.9)**	**($26.3)**
Net Margin	-	-	-	-	-	-	-	-
Reported EPS	**($0.24)**	**($0.12)**	**($0.18)**	**($0.05)**	**($0.10)**	**($0.43)**	**($0.25)**	**($0.20)**
YOY Growth	-	-	-	-	-	-	-	-
Basic Shares Outstanding	59.2	62.8	62.8	70.1	71.2	66.7	100.0	130.0

Source: Zacks Investment Research, Inc. *David Bautz, PhD*

© Copyright 2022, Zacks Investment Research. All Rights Reserved.

HISTORICAL STOCK PRICE



© 2022 barchart.com

© Copyright 2022, Zacks Investment Research. All Rights Reserved.

DISCLOSURES

The following disclosures relate to relationships between Zacks Small-Cap Research ("Zacks SCR"), a division of Zacks Investment Research ("ZIR"), and the issuers covered by the Zacks SCR Analysts in the Small-Cap Universe.

ANALYST DISCLOSURES

I, David Bautz, PhD, hereby certify that the view expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the recommendations or views expressed in this research report. I believe the information used for the creation of this report has been obtained from sources I considered to be reliable, but I can neither guarantee nor represent the completeness or accuracy of the information herewith. Such information and the opinions expressed are subject to change without notice.

INVESTMENT BANKING AND FEES FOR SERVICES

Zacks SCR does not provide investment banking services nor has it received compensation for investment banking services from the issuers of the securities covered in this report or article.
Zacks SCR has received compensation from the issuer directly, from an investment manager, or from an investor relations consulting firm engaged by the issuer for providing non-investment banking services to this issuer and expects to receive additional compensation for such non-investment banking services provided to this issuer. The non-investment banking services provided to the issuer includes the preparation of this report, investor relations services, investment software, financial database analysis, organization of non-deal road shows, and attendance fees for conferences sponsored or co-sponsored by Zacks SCR. The fees for these services vary on a per-client basis and are subject to the number and types of services contracted. Fees typically range between ten thousand and fifty thousand dollars per annum. Details of fees paid by this issuer are available upon request.

POLICY DISCLOSURES

This report provides an objective valuation of the issuer today and expected valuations of the issuer at various future dates based on applying standard investment valuation methodologies to the revenue and EPS forecasts made by the SCR Analyst of the issuer's business.
SCR Analysts are restricted from holding or trading securities in the issuers that they cover. ZIR and Zacks SCR do not make a market in any security followed by SCR nor do they act as dealers in these securities. Each Zacks SCR Analyst has full discretion over the valuation of the issuer included in this report based on his or her own due diligence. SCR Analysts are paid based on the number of companies they cover. SCR Analyst compensation is not, was not, nor will be, directly or indirectly, related to the specific valuations or views expressed in any report or article.

ADDITIONAL INFORMATION

Additional information is available upon request. Zacks SCR reports and articles are based on data obtained from sources that it believes to be reliable, but are not guaranteed to be accurate nor do they purport to be complete. Because of individual financial or investment objectives and/or financial circumstances, this report or article should not be construed as advice designed to meet the particular investment needs of any investor. Investing involves risk. Any opinions expressed by Zacks SCR Analysts are subject to change without notice. Reports or articles or tweets are not to be construed as an offer or solicitation of an offer to buy or sell the securities herein mentioned.

CANADIAN COVERAGE

This research report is a product of Zacks SCR and prepared by a research analyst who is employed by or is a consultant to Zacks SCR. The research analyst preparing the research report is resident outside of Canada, and is not an associated person of any Canadian registered adviser and/or dealer. Therefore, the analyst is not subject to supervision by a Canadian registered adviser and/or dealer, and is not required to satisfy the regulatory licensing requirements of any Canadian provincial securities regulators, the Investment Industry Regulatory Organization of Canada and is not required to otherwise comply with Canadian rules or regulations.