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Medicenna Therapeutics Corp. (MDNA-NASDAQ)

MDNA: Encouraging Early Clinical Data from ABILITY Study…

Based on our probability adjusted DCF model that takes into account potential future revenues of MDNA55 and MDNA11, MDNA is valued at $12/share. This model is highly dependent upon continued clinical success of those compounds and will be adjusted accordingly based upon future clinical results.

Current Price (02/15/22)	$1.68
Valuation	**$12.00**

OUTLOOK

On February 9, 2022, Medicenna Therapeutics Corp. (MDNA) announced financial results for the third quarter of fiscal year 2022 that ended December 31, 2021 and provided a business update. The company recently announced encouraging early clinical data from the Phase 1/2 ABILITY (A Beta-only IL-2 ImmunoTherapY Study) clinical trial of MDNA11. The data showed that treatment with MDNA11 resulted in a two-fold increase in CD8+ T cells and NK cell levels over baseline as well as an approximately two-fold increase over baseline in the CD8+/Treg ratio. No dose limiting toxicities have been seen in the first two dosing cohorts and there has been no evidence of cytokine release syndrome or vascular leak syndrome. The company recently opened the first clinical site in the U.S. and we anticipate the first patient being dosed in the U.S. this quarter. We continue to anticipate the first efficacy results from the ABILITY trial in mid-calendar 2022.

SUMMARY DATA

52-Week High	**$4.34**
52-Week Low	**$1.40**
One-Year Return (%)	**-56.92**
Beta	**0.93**
Average Daily Volume (sh)	**76,079**
Shares Outstanding (mil)	**56**
Market Capitalization (C$mil)	**$93**
Short Interest Ratio (days)	**1**
Institutional Ownership (%)	**25**
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 2018 Estimate	**N/A**
P/E using 2019 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 A	0 A	0 A	0 A	0 A
2022	0 A	0 A	0 A	0 E	0 E
2023					0 E
2024					0 E

Earnings per Share
(in $CAD)

	Q1 (Jun)	Q2 (Sep)	Q3 (Dec)	Q4 (Mar)	Year (Mar)
2021	-$0.05 A	- $0.08 A	-$0.11 A	-$0.11 A	-$0.35 A
2022	-$0.12 A	-$0.15 A	-$0.09 A	-$0.13 E	-$0.52 E
2023					-$0.48 E
2024					-$0.49 E

WHAT'S NEW

Business Update

Encouraging Early Clinical Data for ABILITY Trial

On December 22, 2021, Medicenna Therapeutics Corp. (MDNA) announced encouraging early clinical data from the Phase 1/2 ABILITY Study (A Beta-only IL-2 ImmunoTherapY Study) of MDNA11 in patients with advanced solid tumors. Following the first two dose escalation cohorts, the company reported that:

- There was an approximately two-fold increase over baseline in CD8+ T and NK cell levels at levels in which competing "not-alpha" IL-2 variants have not demonstrated any activity.
- The CD8+/Treg ratio increased by approximately two-fold over baseline, showing that MDNA11 is preferentially increasing anti-cancer CD8+ T cells over pro-tumor Treg cells.
- No dose limiting toxicities have been observed and there has been no evidence of cytokine release syndrome or vascular leak syndrome.

These results, while early, are very encouraging as they show MDNA11 is able to induce an increase in anti-cancer immune cells. We anticipate the first efficacy data from the ABILITY trial in mid-calendar 2022.

Medicenna also announced the first clinical trial site has opened in the U.S. and we expect the first U.S. patient to be dosed in the current quarter. Dosing for patients in the U.S. will initiate with the current dose that is being utilized in Australia (where the trial first began), thus there will be no need to go back and start with lower doses for patients in the U.S. The company has also received regulatory clearance to expand the trial to Canada.

Peer Reviewed Publication of MDNA11 Preclinical Data

On January 26, 2022, Medicenna announced the publication of preclinical data for MDNA11 in the *Journal for ImmunoTherapy of Cancer*. The manuscript, entitled "Fine-tuned Long-Acting Interleukin-2 Superkine Potentiates Durable Immune Responses in Mice and Non-Human Primate" (Merchant *et al*., 2022), describes the potent and long-lasting anti-cancer activity of MDNA11 in mice along with the proliferation and expansion of anti-cancer immune cells in non-human primates, which is consistent with what has been seen so far in the ABILITY study.

In summary, the studies described in the publication show that:

- MDNA11 exhibited a 30-fold increase in binding affinity for IL-2Rβ compared to recombinant human IL-2 (rhIL-2)
- MDNA11 has no affinity for IL-2Rα at concentrations up to 2,000 nM MDNA11
- Both CD8+ T cells and NK cells are important for MDNA11 mediated anti-tumor effect
- Intratumoral CD8+ T cells showed enhanced activation as demonstrated by increased intracellular interferon gamma
- Durable complete responses and long-term protection against tumor re-challenge were seen for MDNA11 as a monotherapy and in combination with checkpoint inhibitors in murine tumor models
- In non-human primates, MDNA11 induced the proliferation and expansion of anti-cancer immune cells with limited stimulation of pro-tumor Treg cells
- MDNA11 was well-tolerated in non-human primates, with the main safety observations of reduced activity and diarrhea being primarily seen at the highest dose level following the first dose and they were generally transient.

New Chief Medical Officer and Formation of Scientific Advisory Board

On January 17, 2022, Medicenna announced that Mann Mushin resigned as Chief Medical Officer and that Martin Bexon, MBBS, will serve as acting Chief Medical Officer in addition to his current role as Medical Monitor for the ABIILITY trial. Dr. Bexon has previously worked as a strategic advisor, study medical expert, and medical monitor for multiple oncology programs in both solid tumors and hematological malignancies. For example, while at Hoffman-La Roche, he designed and executed multiple global clinical trials enrolling more than 10,000 subjects to support product commercialization.

On January 31, 2022, Medicenna announced the formation of its Scientific Advisory Board (SAB) that includes scientists with expertise in cancer immunotherapy, immuno-engineering, and immune monitoring. The SAB will consist of:

Sergio Quezada, PhD (Chairman) – Dr. Quezada is a Professor of Cancer Immunology and Immunotherapy at University College London Cancer Institute. His research is focused on the interaction between the immune system and cancer throughout tumor progression and immunotherapy. Previously, he co-led the development of a first-in-class anti-CD25 antibody at Tusk Therapeutics. Dr. Quezada is also the scientific founder and the Chief Scientific Officer of Achilles Therapeutics.

Burkhard Becher, PhD – Dr. Becher is a Professor at the University of Zurich where he serves as Chair of the Institute of Experimental Immunology. He has published more than 250 peer-reviewed papers in journals such as *Nature*, *Cell*, *Immunity*, and *Nature Medicine*.

David Mooney, PhD – Dr. Mooney is the Robert Pinkas Family Professor of Bioengineering in the Harvard School of Engineering and Applied Sciences. His lab developed the first implantable biomaterial cancer vaccine that recruits and re-educates the immune system to destroy cancer cells. He has published over 400 peer-reviewed articles. Dr. Mooney was elected to the National Academy of Engineering in 2010, the National Academy of Medicine in 2013, and as a Fellow of the National Academy of Inventors in 2017.

William Redmond, PhD – Dr. Redmond is the Director of the Immune Monitoring Laboratory and Full Member at the Earle A. Chiles Research Institute (EACRI) at the Providence Cancer Institute. He is also an Adjunct Assistant Professor in the Department of Molecular Microbiology and Immunology at Oregon Health & Science University. He has extensive experience with murine tumor models and, as Director of the EACRI Immune Monitoring Laboratory, oversees translational research efforts seeking to develop and implement state-of-the-art immune profiling assays.

Financial Update

On February 9, 2022, Medicenna announced financial results for the third quarter of fiscal year 2022 that ended December 31, 2021. The company reported a net loss for the third quarter of fiscal year 2022 of CAD$4.8 million, or CAD$0.09 per share, compared to a net loss of CAD$5.3 million, or CAD$0.11 per share, for the three months ending December 31, 2020. R&D expenses for the third quarter of fiscal year 2022 were CAD$2.9 million compared to CAD$3.2 million for the third quarter of fiscal year 2021. The decrease in expenses was primarily due to decreased CMC costs, decreased preclinical costs associated with the MDNA11 IND-enabling studies ongoing in the prior year period and mostly complete by September 30, 2021, decreased market research activities, and decreased regulatory costs. The decreases were partially offset by higher clinical costs associated with the ABILITY study. G&A expenses for the third quarter of fiscal year 2022 were CAD$2.0 million compared to CAD$2.1 million for the three months ending December 31, 2020.

As of December 31, 2021, Medicenna had approximately CAD$23.4 million in cash, cash equivalents, and marketable securities. We estimate Medicenna has sufficient capital to fund operations through the end of calendar 2022. As of December 31, 2021, Medicenna had approximately 55.6 million shares outstanding and, when factoring in options and warrants, a fully diluted share count of approximately 64.0 million.

Conclusion

The early data from the ABILITY study are highly encouraging, as MDNA11 appears to drive an increase in anti-tumor immune cells while exhibiting a favorable safety profile, including no evidence seen thus far for cytokine release syndrome or vascular leak syndrome. We are eagerly anticipating the first efficacy read out from the trial, which we expect in mid-calendar 2022. In addition, we anticipate an update from the company on the lead candidate from the BiSKITs program, likely through the presentation of preclinical data at a major medical conference in the second quarter of calendar 2022. While we await the initial efficacy data from the ABILITY trial, our valuation remains at $12.

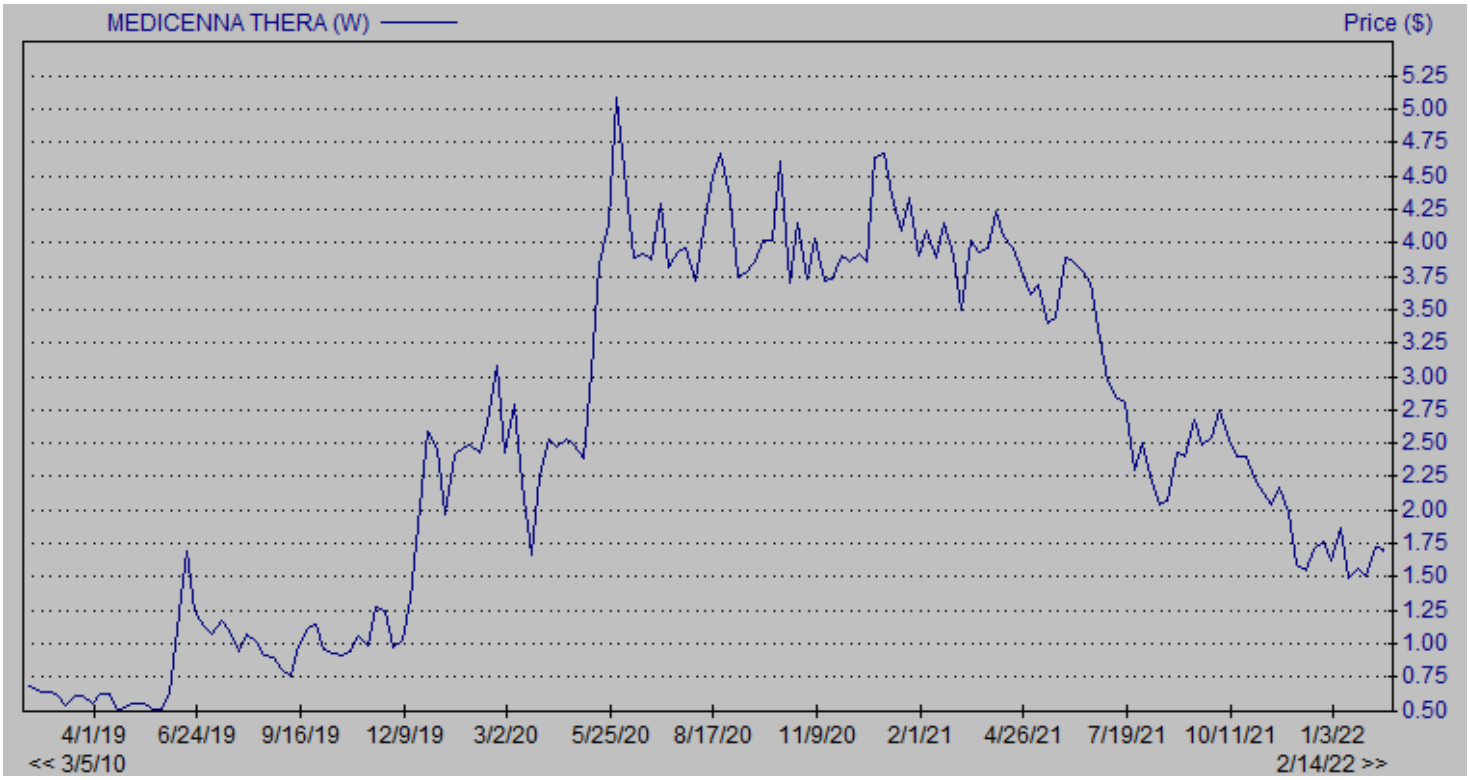
PROJECTED FINANCIALS

Medicenna Therapeutics Corp.
Income Statement

Medicenna Therapeutics Corp. In Canadian Dollars	FY 2021 A	Q1 FY22 A	Q2 FY22 A	Q3 FY22 A	Q4 FY22 E	FY 2022 E	FY 2023 E	FY 2024 E
MDNA55	$0	$0	$0	$0	$0	$0	$0	$0
YOY Growth	-	-	-	-	-	-	-	-
MDNA11	$0	$0	$0	$0	$0	$0	$0	$0
YOY Growth	-	-	-	-	-	-	-	-
Other Income	$0	$0	$0	$0	$0	$0	$0	$0
YOY Growth	-	-	-	-	-	-	-	-
Total Revenues	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
YOY Growth	-	-	-	-	-	-	-	-
Cost of Sales	$0	$0	$0	$0	$0	$0	$0	$0
Product Gross Margin	-	-	-	-	-	-	-	-
Research & Development	$10.9	$4.3	$6.3	$2.9	$4.7	$18.2	$20.0	$22.0
General & Administrative	$6.5	$1.9	$2.0	$2.0	$2.5	$8.3	$9.0	$10.0
Other (Income) Expense	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Operating Income	($17.4)	($6.2)	($8.2)	($4.9)	($7.2)	($26.5)	($29.0)	($32.0)
Operating Margin	-	-	-	-	-	-	-	-
Non-Operating Expenses (Net)	($0.1)	$0.2	($0.1)	($0.1)	($0.1)	($0.1)	($0.4)	($0.4)
Pre-Tax Income	($17.3)	($6.4)	($8.2)	($4.8)	($7.1)	($26.5)	($28.6)	($31.6)
Income Taxes	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Cumulative translation adjustment	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Net Income	**($17.3)**	**($6.4)**	**($8.2)**	**($4.8)**	**($7.1)**	**($26.5)**	**($28.6)**	**($31.6)**
Net Margin	-	-	-	-	-	-	-	-
Reported EPS	**($0.35)**	**($0.12)**	**($0.15)**	**($0.09)**	**($0.13)**	**($0.49)**	**($0.48)**	**($0.49)**
YOY Growth	-	-	-	-	-	-	-	-
Basic Shares Outstanding	49.7	53.6	53.7	54.0	54.5	53.9	60.0	65.0

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

HISTORICAL STOCK PRICE



Source: Zacks Small Cap Research

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