

Biotechnology – Psychedelics

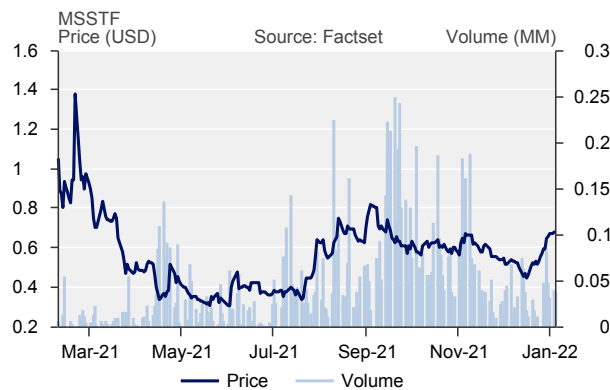
MSSTF - OTCQB

January 6, 2022

Intraday Price 1/6/22	\$0.60
CSE: MSET	C\$0.74
Rating:	Buy
12-Month Target Price:	\$1.50
52-Week Range:	\$0.30 - \$2.00
Market Cap (M):	52.7
Shares O/S (M):	87.8
Float:	89.6%
Avg. Daily Volume (000):	53.1
Debt (M):	\$0.6
Dividend:	\$0.00
Dividend Yield:	0.0%
Risk Profile:	Speculative
Fiscal Year End:	June

Total Expenses ('000)

	2021A	2022E	2023E
1Q	C\$3,354	C\$7,892A	C\$3,537
2Q	C\$1,538	C\$2,795	C\$3,690
3Q	C\$1,763	C\$2,935	C\$3,998
4Q	C\$4,952	C\$3,082	C\$4,152
FY	C\$11,608	C\$16,704	C\$15,376
Prior	C\$8,600	C\$10,914	C\$14,876



Mindset Pharma is listed on the Canadian Securities Exchange (CSE) under the symbol "MSET" and OTCMKTS under the symbol "MSSTF". The stock does not trade on a US National Exchange. Financial data is reported in Canadian dollars (C\$) and is represented as such in our models. Market data including the stock price and target price are translated into US dollars (USD).

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Mindset Pharma Inc.

Buy

Otsuka Comes on Board in Early Stage Development Partnership

Summary

- Yesterday morning, Mindset Pharma announced that the McQuade Center for Strategic Research and Development (MCSR) a subsidiary of Otsuka Pharmaceutical Co. (OTSKF - NR) has entered into a collaboration agreement for Families 2 and 4, shorter acting next gen psychedelic compounds.
- Under the collaboration, MCSR will fully support the development financially and operationally through P1a and P1b studies in addition to a \$5M USD upfront.
- Otsuka has a significant footprint in mental health (initially developed Abilify), and are the Japan partner for Perception Neurosciences' (ATAI - Buy) arketamine.
- For Mindset, this provides the support to conduct development on three families of compounds in parallel; Family 1, which is already expected to have a candidate, MSP1014 (in the clinic in CY22), and now families 2 and 4, while mitigating operational strain and impact to burn rate.
- Conclusion. The deal between Mindset and Otsuka represents the first move from pharma into classical psychedelics. Though small and an early stage collaboration, in our view this is validating of Mindset's next-gen discovery program.

Details

Otsuka deal. Yesterday morning (1/5), Mindset announced that it entered into a collaboration agreement with McQuade Center for Strategic Research and Development (MCSR) a subsidiary of Otsuka Pharmaceutical Co., Ltd (OTSKF - NR). Under the agreement, Otsuka paid Mindset a \$5M (C\$6.4M) upfront and has agreed to fully fund development on Families 2 and 4 through P1b. Both compounds are currently preclinical, though Family 2 is more advanced and the company is currently selecting lead compounds to move into IND enabling studies. We expect the first compound(s) could enter the clinic in 2023. We note that the collaboration does not include commercialization or further development, though MSRD has a right of first refusal for any licensing and the terms allow the companies to expand the collaboration to future development. MSRD also has the ability to potentially receive single-digit percentage royalties if the right of first refusal is not consummated or the agreement is terminated.

Otsuka Pharmaceuticals is a Japanese pharmaceuticals/nutraceuticals company focused on the treatment of central nervous system (CNS) diseases (including mental health), oncology, cardiovascular and renal disease, tuberculosis, and ophthalmology. The company discovered Abilify, an atypical antipsychotic used for depression, schizophrenia, and bipolar disorder, which represents one of the most successful drugs of all time reaching peak sales of >\$7B in the early 2010s. Otsuka generated sales of ~\$13.3B in 2020 and currently trades at a ~\$20B market cap. Otsuka is also the Japan partner for Perception Neurosciences' (an atai subsidiary {ATAI - Buy}) arketamine-based drug candidate, PCN-101, which is being developed for depression.

Model/financial update. Mindset reported F1Q22 (Sep) results on 11/26/21 with a net loss of (C\$7.9M), though this included C\$4.3M in stock based compensation. The company ended the period with C\$5.1M of cash on the balance sheet. We have factored in the \$5M USD paid by Otsuka and estimate the company should have ~C\$8M-C\$9M in cash providing runway through late CY22. We have increased expense estimates for FY22 to C\$16.7M, from C\$10.9M and for FY23 to C\$15.4M from C\$14.9M. The increase in FY22 estimates is largely due to stock based compensation in the reported quarter. No change to PT.

Four families of next-gen psychedelics. Mindset is developing four patent-pending families of compounds: Family 1 (psilocybin analogues), Family 2 (shorter-acting psilocybin analogues), Family 3 (longer-acting psilocybin analogues), and Family 4 (DMT and 5-MeO-DMT analogues). Families 2 and 4 are designed to be shorter acting vs. psilocybin (which lasts 6+ hours). Shorter duration is among the most important qualities for next-gen psychedelics for macrodosing, since 1-2 therapists and a room in a treatment center are required for the full duration. By reducing duration, psychedelic-assisted psychotherapy becomes more easily scalable. This profile is ideal for psychiatric indications like depression, anxiety, or substance abuse. Family 3, on the other hand, is designed for reduced potency and longer duration. This profile is ideal for microdosing, where the dose is sub-perceptual (more like a traditional therapeutic) and longer activity becomes a benefit. These drugs are likely to target chronic dosing for indications like ADHD or Alzheimer's disease.

- **Short-acting compounds – Family 2.** Preclinical data from Family 2 in vitro screening has demonstrated a 5x-10x increase in effect size compared to psilocin on human 5-HT_{2A} receptors, and has also demonstrated metabolism up to 2x as fast. In vivo rodent studies confirmed this observation with a half-life of key Family 2 compounds less than half that of psilocybin.
- **Short-acting compounds – Family 4.** In vitro studies of Family 4 studies indicated a greater effect size at the 5-HT_{1A}, 5-HT_{2A}, and 5-HT_{2C} receptors vs. DMT/5-MeO-DMT, with a broad range of half lives from 7-90 minutes. Head twitch and behavioral assays also demonstrated increased serotonin activity. While this raises the concern of serotonergic toxicity, which can lead to high blood pressure, tremors, delirium, and a range of other symptoms, additional in vivo results suggest that Mindset's target compounds produced serotonin syndrome at lower rates vs. 5-MeO-DMT, with some compounds showing no signs of serotonin syndrome. Overall, Family 4 is differentiated from Mindset's other short-acting family (number 2), in the diversity of pharmacological effects and properties, which could serve a wide range of applications.

Mindset Pharma Inc.: Income Statement (\$000)	Jun-21	Sept	Dec	Mar	Jun	Jun-22	Jun-23	Jun-24	Jun-25	Jun-26	Jun-27	Jun-28	Jun-29	Jun-30	Jun-31	Jun-32
YE June 31	2021A	1Q22A	2Q22E	3Q22E	4Q22E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E
Revenue:																
MSP-1014, Treatment-resistant depression (US)	-	-	-	-	-	-	-	-	-	-	-	16,170	42,871	90,929	144,646	178,963
MSP-1014, Treatment-resistant depression (EU5)	-	-	-	-	-	-	-	-	-	-	-	10,374	29,629	63,465	106,205	136,495
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Next-gen psychedelic compounds (platform value)	-	-	-	-	-	-	-	-	-	-	-	25,000	50,000	75,000	100,000	125,000
Net revenue	-	-	-	-	-	-	-	-	-	-	-	51,544	122,500	229,395	350,851	440,458
Collaborative revenue:																
Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Upfront from Otsuka	-	-	-	6,350	-	6,350	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Collaborative Revenue	-	-	-	6,350	-	6,350	-	-	-	-	-	-	-	-	-	-
Total Revenue	-	-	-	6,350	-	6,350	-	-	-	-	-	51,544	122,500	229,395	350,851	440,458
Gross Margins:																
Cost of Goods Sold	-	-	-	-	-	-	-	-	-	-	-	10,309	18,375	22,939	35,085	44,046
%Gross Margin	-	-	-	-	-	-	-	-	-	-	-	80%	85%	90%	90%	90%
Gross Profit	-	-	-	6,350	-	6,350	-	-	-	-	-	41,236	104,125	206,455	315,766	396,412
Operating Expenses:																
Research and Development	2,222	1,394	1,533	1,610	1,690	6,226	9,339	14,008	18,211	27,316	32,780	34,419	36,140	37,947	39,844	41,836
%R&D																
Selling, General and Administrative	2,485	1,052	1,262	1,325	1,392	5,031	6,037	7,245	8,694	10,433	11,476	14,919	19,394	21,334	23,467	25,814
%SG&A																
Investor relations	-	1,196	-	-	-	1,196	-	-	-	-	-	-	-	-	-	-
Stock based compensation	2,002	4,250	-	-	-	4,250	-	-	-	-	-	-	-	-	-	-
Listing expense	1,755	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reverse takeover transaction costs	3,144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Expenses	11,608	7,892	2,795	2,935	3,082	16,704	15,376	21,253	26,905	37,749	44,256	59,646	73,909	82,220	98,396	111,696
Operating Income (Loss)	(11,608)	(7,892)	(2,795)	3,415	(3,082)	(10,354)	(15,376)	(21,253)	(26,905)	(37,749)	(44,256)	(8,102)	48,591	147,175	252,455	328,762
Interest and other income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in fair value of convertibles	(71)	(13)	-	-	-	(13)	-	-	-	-	-	-	-	-	-	-
Gain on settlement of debt	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Other Income	(46)	(13)	-	-	-	(13)	-	-	-	-	-	-	-	-	-	-
Pretax Income	(11,653)	(7,905)	(2,795)	3,415	(3,082)	(10,367)	(15,376)	(21,253)	(26,905)	(37,749)	(44,256)	(8,102)	48,591	147,175	252,455	328,762
Taxes on income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,049	16,438
Tax Rate															2%	5%
GAAP Net Income (Loss)	(11,653)	(7,905)	(2,795)	3,415	(3,082)	(10,367)	(15,376)	(21,253)	(26,905)	(37,749)	(44,256)	(8,102)	48,591	147,175	247,406	312,324
Foreign currency translation loss	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total comprehensive loss	(11,653)	(7,905)	(2,795)	3,415	(3,082)	(10,367)	(15,376)	(21,253)	(26,905)	(37,749)	(44,256)	(8,102)	48,591	147,175	247,406	312,324
GAAP-EPS	(0.20)	(0.09)	(0.03)	0.04	(0.04)	(0.12)	(0.16)	(0.20)	(0.24)	(0.32)	(0.36)	(0.06)	0.39	1.17	1.96	2.46
GAAP-EPS (Dil)	(0.20)	(0.09)	(0.03)	0.04	(0.04)	(0.12)	(0.16)	(0.20)	(0.24)	(0.32)	(0.36)	(0.06)	0.39	1.17	1.96	2.46
Wgt'd Avg Shrs (Bas) - '000s	57,659	86,047	86,133	86,219	86,306	86,176	96,537	104,935	112,863	119,825	124,315	124,813	125,313	125,815	126,319	126,825
Wgt'd Avg Shrs (Dil) - '000s	57,659	86,047	86,133	86,219	86,306	86,176	96,537	104,935	112,863	119,825	124,315	124,813	125,313	125,815	126,319	126,825

Source: Company reports and Maxim

DISCLOSURES

Mindset Pharma Inc. Rating History as of 01/04/2022

powered by: BlueMatrix



Maxim Group LLC Ratings Distribution		As of: 01/05/22	
		% of Coverage Universe with Rating	% of Rating for which Firm Provided Banking Services in the Last 12 months
Buy	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to outperform its relevant index over the next 12 months.	89%	55%
Hold	Fundamental metrics are currently at, or approaching, industry averages. Therefore, we expect this stock to neither outperform nor underperform its relevant index over the next 12 months.	11%	46%
Sell	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to underperform its relevant index over the next 12 months.	0%	0%

**See valuation section for company specific relevant indices*

I, Michael Okunewitch, attest that the views expressed in this research report accurately reflect my personal views about the subject security and issuer. Furthermore, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report.

I, Jason McCarthy, Ph.D., attest that the views expressed in this research report accurately reflect my personal views about the subject security and issuer. Furthermore, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report.

The research analyst(s) primarily responsible for the preparation of this research report have received compensation based upon various factors, including the firm's total revenues, a portion of which is generated by investment banking activities.

Maxim Group makes a market in Mindset Pharma Inc.

Maxim Group expects to receive or intends to seek compensation for investment banking services from Mindset Pharma Inc. in the next 3 months.

MSSTF: For Mindset Pharma Inc., we use the BTK (ARCA Biotechnology Index) as the relevant index.

Valuation Methods

MSSTF: We model commercialization of MSP-1014 in FY27 in the US and EU5 for treatment-resistant depression (TRD) with a 90% risk adjustment based on the stage of development. A platform value is assigned to the pipeline. A 30% discount is then applied to the free cash flow, discounted EPS, and sum-of-the-parts models, which are equally weighted to derive a 12-month price target.

Price Target and Investment Risks

MSSTF: Aside from general market and other economic risks, risks particular to our price target and rating for Mindset Pharma Inc. include: (1) the regulatory and clinical risk associated with product development; (2) the ability to access capital and the very high likelihood that company will need to raise additional capital, the terms of which may not be favorable based on the outcome of clinical data and other factors, and if the company is unable to raise capital, this may hinder the company's ability to continue operations; (3) the rate and degree of progress of product development; (4) the rate of regulatory approval and timelines to potential commercialization of products; (5) the level of success achieved in clinical trials; (6) the requirements for marketing authorization from regulatory bodies in the United States and other countries; (7) the liquidity and market volatility of the company's equity securities; (8) regulatory and manufacturing requirements and uncertainties; (9) product and technology developments by competitors, potentially with more resources and commercial infrastructure; (10) inability, if product(s) is approved to gain adequate market share; (11) ability of the company to achieve a US exchange listing; (12) impact of comprehensive tax reform in the US and Ex-US tax policy; (13) geopolitical risk for ex-US manufacturing facilities; (14) delays related to COVID-19 could impact the company's ability operate and conduct clinical trials; (15) foreign currency exchange rate fluctuation; (16) failure of third-parties to meet contractual obligations, potentially impacting drug development. (17) Drug scheduling and other regulatory/legal issues with psychedelic-based therapeutics; (18) Challenges around intellectual property associated with psychedelic-based therapeutics, which could result in not obtaining IP protections, exclusivity and other impacts that could materially impact the potential value of these drugs and treatment areas. Legal challenges could also result in lengthy and costly litigation; (19) The risks associated with novel compounds may exceed those in more well studied classical psychedelic compounds; (20) The stock trades on the OTCMKT and Canadian National Securities Exchange, and is not listed on a US National Exchange.

RISK RATINGS

Risk ratings take into account both fundamental criteria and price volatility.

Speculative – Fundamental Criteria: This is a risk rating assigned to early-stage companies with minimal to no revenues, lack of earnings, balance sheet concerns, and/or a short operating history. Accordingly, fundamental risk is expected to be significantly above the industry. **Price Volatility:** Because of the inherent fundamental criteria of the companies falling within this risk category, the price volatility is expected to be significant with the possibility that the investment could eventually be worthless. Speculative stocks may not be suitable for a significant class of individual investors.

High – Fundamental Criteria: This is a risk rating assigned to companies having below-average revenue and earnings visibility, negative cash flow, and low market cap or public float. Accordingly, fundamental risk is expected to be above the industry. **Price Volatility:** The price volatility of companies falling within this category is expected to be above the industry. High-risk stocks may not be suitable for a significant class of individual investors.

Medium – Fundamental Criteria: This is a risk rating assigned to companies that may have average revenue and earnings visibility, positive cash flow, and is fairly liquid. Accordingly, both price volatility and fundamental risk are expected to approximate the industry average.

Low – Fundamental Criteria: This is a risk rating assigned to companies that may have above-average revenue and earnings visibility, positive cash flow, and is fairly liquid. Accordingly, both price volatility and fundamental risk are expected to be below the industry.

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ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST



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