

## Mast Therapeutics (MSTX - \$ 0.07)

### 3Q16: Wind Down of Vepoloxamer Programs; Key Focus On Continuing AIR001 Clinical Development

MSTX reported 3Q16 financial results yesterday with a net loss of (\$8.2MM), vs. estimates of Laidlaw (\$8.6MM) and the Street (\$10.5MM). Net loss per share equated to (\$0.04) same as Laidlaw estimates, vs. (\$0.05) estimates of the Street. MSTX reported cash of ~\$27MM at the end of 3Q16, and after netting out the \$10MM debt repayment and projected 9MM 2017 expenses, we estimate it would be enough to support its operations into year-end 2017, in our opinion.

- AIR001 clinical development primary focus.** MSTX's primary focus is on continuing clinical development of AIR001 following the failure of vepoloxamer in SCD Phase III study. MSTX recently reported an interim analysis of the ongoing 50-patient study of AIR001 in pulmonary hypertension (PH), which includes cohort with PH associated with heart failure with preserved ejection fraction (PH-HFpEF) Phase II study, which was published in Journal of Clinical Investigation. Of the 36 patients, 10 were of PH-HFpEF, 20 were pulmonary arterial hypertension (PAH) or World Health Organization (WHO) Group 1, and 6 were with WHO Group 3 PH. Additional insight from the publication suggested AIR001 is efficacious in PH-HFpEF and Group 3 PH given the improvements in left and right ventricular filling pressure and pulmonary artery compliance. The study also suggested that lack of change in pulmonary vascular resistance could limit efficacy in PAH patients. Although the study size is relatively small (n=16), we are encouraged by the positive results given both PH-HFpEF and Group 3 PH patients have substantial unmet need for managing their condition; while multiple medications are already available for PAH. As such, AIR001 could have the potential treating patients with limited competition from drugs in development. Further, patient enrollment remains on track for the ongoing AIR001 in HFpEF (conducted by Heart Failure Clinical Research Network) Phase II study (n=100), and we anticipate top-line results could be available in 4Q17 – critical catalyst for MSTX shares, in our opinion.
- Action.** We are reiterating our Neutral rating looking for more visibility for the development of AIR001. Although we believe AIR001 in HFpEF could be very promising, we believe MSTX shares are likely be range bound for a while before completion and data reporting from the ongoing AIR001 in HFpEF Phase II study. We have adjusted our financial model to reflect MSTX's guidance.

#### Earnings Estimates: (per share)

(Dec)	1Q	2Q	3Q	4Q	FY	P/E
<b>FY-16E</b>	-0.06A	-0.05A	-0.04A	-0.03	-0.18	N.A.
<b>FY-15A</b>	-0.06	-0.06	-0.06	-0.06	-0.25	N.A.
<b>FY-14A</b>	-0.06	-0.06	-0.06	-0.05	-0.23	N.A.
<b>FY-13A</b>	-0.12	-0.09	-0.05	-0.06	-0.28	N.A.

Source: Laidlaw & Company estimates

Healthcare/Biotechnology

Ticker: **MSTX**  
Rating: **Neutral**  
Price Target:

#### Trading Data:

Last Price (11/08/2016)	\$ 0.07
52-Week High (9/6/2016)	\$ 0.71
52-Week Low (11/1/2016)	\$ 0.07
Market Cap. (MM)	\$ 17
Shares Out. (MM)	238

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## Anticipated milestones in 2016 and beyond

Product	Indication	Event	Timing	Importance
AIR001	PH associated with heart failure with preserved ejection fraction (HFpEF)	Potentially complete patient enrollment	4Q17	***
		Potentially report Phase II (INDIE-HFpEF) top-line results	4Q17	****

\*\*\*\* / \*\*\*\*\* Major catalyst event that could impact share price very significantly while \*\*\* event is more informative

Source: Laidlaw & Company and company presentation

## Major Risks

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**Risks of clinical study failure could have a major impact on MSTX share value.** Given the clinical development focus rests entirely on AIR001 and as such the upside for MSTX shares is based on the assumption that a positive AIR001 in Phase II (INDIE-HFpEF) study outcome could progress clinical development of AIR001 potentially to a pivotal stage; a failure of the INDIE-HFpEF study would have significant impact on MSTX share value.

**Limited product diversity could increase overall risk.** Given the MSTX product portfolio is limited to mid-stage AIR001, majority of the product pipeline value mainly resides on AIR001 in HFpEF development. As such, we believe the company at the current stage has very limited diversification potential in its product pipeline.

**Additional financing could dilute shareholder value.** Although the company ended 2Q16 with ~\$35MM cash and we estimate the company's cash might reach \$15MM by end of 3Q16, MSTX could potentially need more financial resources going forward if they want to expand and further develop its pipeline. Should AIR001 show a positive outcome in Phase II study the company might need to increase its financial resources, which includes issuing new equity to raise additional cash. Under such a scenario, the share value of existing shareholders could be diluted..

Figure 1: Income Statement

<b>Mast Therapeutics – Income Statement</b>										
(\$'000)	2012	2013	2014	2015	1Q16	2Q16	3Q16	4Q16E	2016E	2017E
<b>Revenue</b>										
Net sales	0	0	0	0	-	-	-	-	0	0
Licensing revenue	0	0	0	0	-	-	-	-	0	0
Grant revenue	0	0	0	0	-	-	45	-	45	0
Total revenue	0	0	0	0	-	-	45	-	45	0
<b>Costs of goods</b>	0									0
Research and development	8,088	12,902	19,436	28,264	7,875	7,752	5,088	2,798	23,513	6,584
Selling, general and administrative	7,519	8,518	9,487	10,963	2,835	2,439	2,134	1,665	9,073	2,722
Marketing and sales										0
Transaction-related expenses	(70)	80	271	0					0	0
Depreciation and amortization	90	40	84	146	32	30	24	24	110	110
<b>Total Operating Expenses</b>	15,628	21,539	29,279	39,373	10,742	10,221	7,246	4,487	32,696	9,416
Operating Incomes (losses)	(15,628)	(21,539)	(29,279)	(39,373)	(10,742)	(10,221)	(7,201)	(4,487)	(32,651)	(9,416)
Reduction of fair value of warrants	0	0	0	0	0	0	0	0	0	0
Investment income	74	60	67	47	39	0	0	0	39	43
Interest expense	0	0	0	0	(519)	(485)	(951)	(951)	(2,906)	(3,197)
Other income/(expense), net	(5)	(1)	511	(516)	15		0	0	15	(20)
Loss before cumulative effect of change in accounting principle	(15,559)	(21,480)	(28,701)	(39,842)	(11,207)	(10,706)	(8,152)	(5,438)	(35,503)	(12,589)
Cumulative effect of change in accounting principle	0	0	0	0	0	0	0	0	0	0
<b>Income before tax</b>	(15,559)	(21,480)	(28,701)	(39,842)	(11,207)	(10,706)	(8,152)	(5,438)	(35,503)	(12,589)
Tax	0	0	0	0	0	0	0	0	0	0
<b>Net Income (Loss)</b>	(15,559)	(21,480)	(28,701)	(39,842)	(11,207)	(10,706)	(8,152)	(5,438)	(35,503)	(12,589)
Net Income (Loss) Applicable to Common Shareholders	(15,559)	(21,480)	(28,701)	(39,842)	(11,207)	(10,706)	(8,152)	(5,438)	(35,503)	(12,589)
Net Earnings (Losses) Per Share—Basic and Diluted	(\$0.33)	(\$0.28)	(\$0.23)	(\$0.25)	(\$0.06)	(\$0.05)	(\$0.04)	(\$0.03)	(\$0.18)	(\$0.06)
Shares outstanding—basic	47,641	76,586	122,409	162,204	178,115	196,554	214,714	215,714	201,274	202,274
Shares outstanding—diluted	47,641	76,586	122,409	162,204	178,115	196,554	214,714	215,714	201,274	202,274
<b>Margin Analysis (% of Sales/Revenue)</b>										
Costs of goods									9%	9%
R&D	NA	NA	NA	NA	NA	NA	11307%	NA	52252%	NA
MG&A	NA	NA	NA	NA	NA	NA	4742%	NA	20161%	NA
Operating Income (loss)	NA	NA	NA	NA	NA	NA	-16002%	NA	-72558%	NA
Pretax	NA	NA	NA	NA	NA	NA	-18116%	NA	-78895%	NA
Tax Rate										37%
Net Income	NA	NA	NA	NA	NA	NA	-18116%	NA	-78895%	NA
<b>Financial Indicator Growth Analysis (YoY%)</b>										
Licensing revenue				0%					0%	0%
Grant revenue				0%					0%	0%
Total Revenue	NA	NA	NA	NA	NA	NA	NA	NA	NA	-100%
R&D	40%	60%	51%	45%	30%	0%	-31%	-63%	-17%	-72%
SG&A	5%	13%	11%	16%	-21%	1%	-13%	-34%	-17%	-70%
Marketing and sales										
Operating Income (Losses)	17%	38%	36%	34%	11%	0%	-27%	-54%	-17%	-71%
Net Income	17%	38%	34%	39%	17%	5%	-18%	-46%	-11%	-65%
EPS	-31%	-14%	-16%	5%	4%	-20%	-37%	-59%	-28%	-65%
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Source: Bloomberg LP; Company reports; Laidlaw &amp; Company estimates

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**Additional information available upon request.**

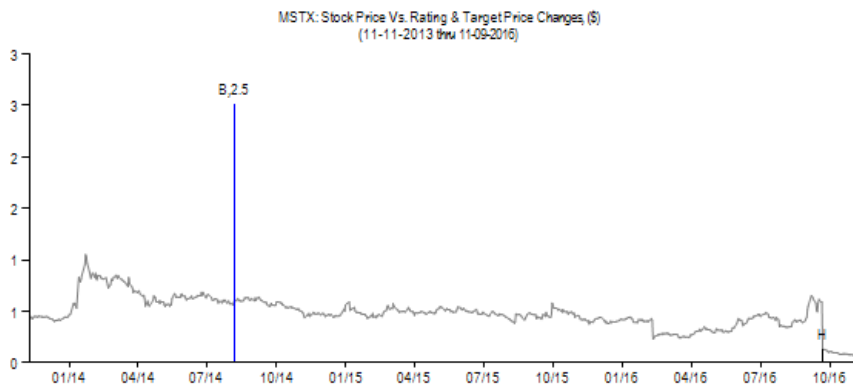
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Date	Rating	Closing Price (\$)
08/06/2014	Buy (B)	0.60
09/21/2016	Hold (H)	0.12

**3 Year Price Change History**

Date	Target Price (\$)	Closing Price, (\$)
08/06/2014	2.50	0.60
09/21/2016		0.12



Source: Laidlaw &amp; Company

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Laidlaw & Company Rating System*		% of Companies Under Coverage With This Rating	% of Companies for which Laidlaw & Company has performed services for in the last 12 months	
			Investment Banking	Brokerage
<b>Strong Buy (SB)</b>	Expected to significantly outperform the sector over 12 months.	2.56%	2.56%	0.00%
<b>Buy (B)</b>	Expected to outperform the sector average over 12 months.	58.97%	28.21%	2.56%
<b>Hold (H)</b>	Expected returns to be in line with the sector average over 12 months.	5.13%	0.00%	0.00%
<b>Sell (S)</b>	Returns expected to significantly underperform the sector average over 12 months.	2.56%	0.00%	0.00%

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