
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): November 8, 2016

Mast Therapeutics, Inc.

(Exact name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

001-32157
(Commission File Number)

84-1318182
(IRS Employer
Identification No.)

**3611 Valley Centre Drive, Suite 500,
San Diego, CA**
(Address of Principal Executive Offices)

92130
(Zip Code)

Registrant's Telephone Number, Including Area Code: (858) 552-0866

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instructions A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 2.02 Results of Operations and Financial Condition.

On November 8, 2016, Mast Therapeutics, Inc. issued a press release announcing its financial results for the three and nine months ended September 30, 2016. A copy of the press release is furnished as Exhibit 99.1 hereto.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

The list of exhibits called for by this Item is incorporated by reference to the Exhibit Index immediately following the signature page of this report.

In accordance with General Instruction B.2. of Form 8-K, the information in Item 2.02 of this report and Exhibit 99.1 hereto shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference in any of the Company’s filings under the Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof, regardless of any incorporation language in such a filing, except as expressly set forth by specific reference in such a filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Mast Therapeutics, Inc.

Date: November 8, 2016

By: /s/ Brandi L. Roberts

Brandi L. Roberts

Chief Financial Officer and Senior Vice President

Exhibit Index

**Exhibit
Number**

Description

99.1 Press release dated November 8, 2016



MAST THERAPEUTICS REPORTS THIRD QUARTER 2016 FINANCIAL RESULTS

Conference Call Scheduled Today at 4:30pm ET / 1:30pm PT

SAN DIEGO – November 8, 2016 – Mast Therapeutics, Inc. (NYSE MKT: MSTX), a clinical-stage biopharmaceutical company, today reported financial results for the quarter ended September 30, 2016.

“We are rapidly advancing the clinical development of AIR001 in heart failure with preserved ejection fraction. Notably, we were pleased to announce positive results this quarter on the first 10 out of 20 planned PH-HFpEF patients in an ongoing 50-patient study of AIR001 in pulmonary hypertension. We also are pleased that enrollment in the 100-patient study of AIR001 in HFpEF being conducted by the Heart Failure Clinical Research Network continues to be on track, with data from this Phase 2 proof-of-concept study anticipated in the fourth quarter of 2017,” stated Brian M. Culley, Chief Executive Officer.

“As reflected by our markedly reduced operating expenses last quarter, we have moved quickly to wind down our vepoloxamer programs in sickle cell disease and heart failure, so that our cash can be redeployed to development of AIR001. Because all three active clinical trials of AIR001 are being funded substantially by sources other than Mast, we anticipate that our 2017 operating expenses will be approximately \$8 to \$9 million, excluding share-based compensation expense. We also continue to work on our nonclinical study of vepoloxamer in ischemic stroke, which is entirely funded by a Small Business Innovation Research grant from the National Institute of Neurological Disorders and Stroke of the National Institutes of Health. We will continue to evaluate additional opportunities for partnerships which can bring value to shareholders,” continued Mr. Culley.

Third Quarter 2016 Operating Results

The Company’s net loss for the third quarter of 2016 was \$8.2 million, or \$0.04 per share (basic and diluted), compared to a net loss of \$9.9 million, or \$0.06 per share (basic and diluted), for the same period in 2015.

The Company recognized \$45,000 of revenue for the third quarter of 2016, representing reimbursement of costs related to the nonclinical study of vepoloxamer that is being funded by a grant from the National Institutes of Health (NIH). The Company recognized no revenue for the same period in 2015.

Research and development (R&D) expenses for the third quarter of 2016 were \$5.1 million, a decrease of \$2.2 million, or 31%, compared to \$7.3 million for the same period in 2015. The decrease was due primarily to decreases of \$1.6 million in external nonclinical study fees and expenses, \$0.4 million in external clinical study fees and expenses and \$0.2 million in personnel costs for the 2016 period.

The decrease in external nonclinical study fees and expenses was due primarily to decreases in research-related manufacturing costs for vepoloxamer (\$1.2 million), nonclinical studies of vepoloxamer (\$0.7 million) and research-related manufacturing for AIR001 (\$0.1 million), offset by increased costs related to preparing a new drug application for vepoloxamer (\$0.4 million), which project was discontinued in September 2016. The decrease in external clinical study fees and expenses was due primarily to decreases in costs for the Phase 3 study of vepoloxamer in sickle cell disease (\$0.8 million) and the Phase 2 study of vepoloxamer in acute limb ischemia, which the Company discontinued and began to wind down in the third quarter of 2015 (\$0.1 million), offset by

increased costs related to the Phase 2 studies of AIR001 in HFpEF (\$0.4 million) and the Phase 2 study of vepoloxamer in heart failure (\$0.1 million).

Selling, general and administrative (SG&A) expenses for the third quarter of 2016 were \$2.1 million, a decrease of \$0.4 million, or 13%, compared to \$2.5 million for the same period in 2015. The decrease was primarily due to reduced personnel costs and fees for consulting and legal services compared to the 2015 period.

Interest expense was \$0.9 million for the third quarter of 2016, compared to \$0.1 million for the same period in 2015. The increase in interest expense was primarily due to a full quarter of interest expense on a \$15.0 million principal balance under our debt facility in 2016 versus a partial quarter in 2015, as well as increased amortization of debt issuance costs as a result of a change in the amortization schedule of such costs due to prepayment of \$10.0 million of the principal balance in October 2016, which was triggered by negative top-line results in the Phase 3 study of vepoloxamer in September 2016.

Year-to-Date Financial Results

The Company's net loss for the nine months ended September 30, 2016 was \$30.1 million, or \$0.15 per share (basic and diluted), compared to a net loss of \$29.7 million, or \$0.18 per share (basic and diluted), for the same period in 2015.

The Company recognized \$45,000 of revenue for the nine months ended September 30, 2016, representing reimbursement of costs related to the nonclinical study of vepoloxamer that is being funded by a grant from the NIH. The Company recognized no revenue for the same period in 2015.

R&D expenses for the nine months ended September 30, 2016 were \$20.7 million, a decrease of \$0.4 million, or 2%, compared to \$21.1 million for the same period in 2015. The decrease was due primarily to a decrease of \$1.2 million in external nonclinical study fees and expenses, offset by increases of \$0.6 million in external clinical study fees and expenses and \$0.2 million in share-based compensation expense.

The \$1.2 million decrease in external nonclinical study fees and expenses was due primarily to decreases in research-related manufacturing costs for vepoloxamer (\$2.1 million) and costs for nonclinical studies of vepoloxamer (\$1.0 million), offset by increases in costs related to preparing a new drug application for vepoloxamer (\$1.8 million) and research-related manufacturing for AIR001 (\$0.1 million). The \$0.6 million increase in external clinical study fees and expenses was due primarily to increases in costs for the Phase 2 study of vepoloxamer in heart failure (\$1.4 million) and the Phase 2 studies of AIR001 in HFpEF (\$0.7 million), offset by a net decrease in costs associated with clinical studies of vepoloxamer for its development in sickle cell disease (\$0.9 million) and the Phase 2 study of vepoloxamer in ALI (\$0.5 million).

SG&A expenses for the nine months ended September 30, 2016 were \$7.4 million, a decrease of \$1.0 million, or 12%, compared to \$8.4 million for the same period in 2015. The decrease was primarily due to reduced severance and share-based compensation expenses and fees for consulting and legal services compared to the 2015 period.

Interest expense was \$2.0 million for the nine months ended September 30, 2016, compared to \$0.1 million for the same period in 2015. The increase in interest expense was primarily due to a full nine months of interest expense on a \$15 million principal balance under our debt facility in 2016 versus approximately a month in 2015, as well as increased amortization of debt issuance costs as a result of a change in the amortization schedule of such costs due to prepayment of \$10 million of the principal balance in October 2016.

Investor Conference Call

The Company will hold a conference call today, November 8, 2016, at 4:30 p.m. Eastern Time / 1:30 p.m. Pacific Time to discuss its financial results for the third quarter of 2016 and provide a general business update. Interested parties may access the conference call by dialing (855) 239-3120 from the U.S. and (412) 542-4127 from outside the U.S. and should request the Mast Therapeutics, Inc. Third Quarter 2016 Conference Call. A live webcast of the conference call will be available online from the Investors section of Mast's website at <http://www.masttherapeutics.com/investors/events/>. Replays of the webcast will be available on the Company's

website for 30 days and a telephone replay will be available through November 15, 2016 by dialing (877) 344-7529 from the U.S. and (412) 317-0088 from outside the U.S. and entering replay access code 10096120.

About Mast Therapeutics

Mast Therapeutics, Inc. is a publicly traded biopharmaceutical company headquartered in San Diego, California. The Company has two clinical-stage investigational new drugs, AIR001 and vepoloxamer. AIR001, a sodium nitrite solution for intermittent inhalation via nebulization, is in Phase 2 clinical development for the treatment of heart failure with preserved ejection fraction (HFpEF). More information can be found on the Company's web site at www.masttherapeutics.com. Mast Therapeutics™ and the corporate logo are trademarks of Mast Therapeutics, Inc.

Forward Looking Statements

Mast Therapeutics cautions you that statements in this press release that are not a description of historical fact are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by the use of words referencing future events or circumstances such as "expect," "intend," "plan," "anticipate," "believe," and "will," among others. Examples of forward-looking statements in this press release include statements relating to the Company's development plans for its product candidates, AIR001's potential utility to treat HFpEF, the timing of completion and results of clinical studies of AIR001, the Company's business plans and objectives, and its anticipated operating expenses, results of operations and financial condition. Forward-looking statements should not be read as guarantees of future performance or results because they involve the Company's beliefs and assumptions based on currently available information and are subject to significant known and unknown risks and uncertainties that may cause actual performance and results to differ materially from expectations indicated by the forward-looking statements. Some of the factors that could cause actual performance or results to differ include, without limitation: the Company's need for additional funding and risk that it may not be able to obtain sufficient funding as needed; risks associated with the Company's ability to manage operating expenses; uncertainty related to the Company's ability to continue as a going concern; risk of an event of default under the Company's debt facility that could result in the Company being required to repay its outstanding debt obligation and related fees on an accelerated basis and/or at a time that could be detrimental to the Company's financial condition, operations and/or business strategy; the impact of significant reductions in the Company's operations on its ability to develop its product candidates or maintain compliance with laws and regulations relating to public companies; the Company's ability to maintain compliance with NYSE MKT continued listing standards and policies and to maintain the listing and trading of its common stock on a national securities exchange; completion of a more detailed analysis of EPIC data and reporting of additional data from that study; uncertainties inherent in the conduct of clinical studies and the risk that the Company's product candidates may not demonstrate adequate safety, efficacy or tolerability in one or more clinical studies for approval by regulatory authorities; the Company's lack of control over the investigator-sponsored clinical studies of AIR001, including whether the studies will commence or be completed on anticipated timelines, or at all; the potential for the Company to sell or license part or all of its assets; the potential for significant delays, reductions, or discontinuation of current and/or planned development activities if the Company is unable to raise sufficient additional capital as needed; the Company's dependence on third parties to assist with important aspects of development of the Company's product candidates, including the conduct of its clinical studies, the manufacture and supply of clinical trial material, including drug delivery devices, and the conduct of regulatory activities, and the risk that such third parties may fail to perform as expected leading to delays in product candidate development and additional costs; the risk that the Company is not able to obtain or maintain effective patent coverage or other market exclusivity protections for its products, if approved, or that the use or manufacture of the Company's products may infringe the proprietary rights of others; and other risks and uncertainties more fully described in the Company's press releases and its reports filed with the Securities and Exchange Commission. The Company's public filings with the Securities and Exchange Commission are available at www.sec.gov.

You are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date when made. Mast Therapeutics does not intend to revise or update any forward-looking statement set forth in this press release to reflect events or circumstances arising after the date hereof, except as may be required by law.

Contact:

Mast Therapeutics

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[Tables to Follow]

Mast Therapeutics, Inc.
Condensed Consolidated Statements of Operations
(In thousands, except per share data)

	Three months ended September 30, (Unaudited)		Nine months ended September 30, (Unaudited)	
	2016	2015	2016	2015
Total net revenue	\$ 45	\$ —	\$ 45	\$ —
Operating expenses:				
Research and development	5,088	7,330	20,715	21,106
Selling, general and administrative	2,134	2,460	7,408	8,448
Depreciation and amortization	24	38	86	105
Total operating expenses	<u>7,246</u>	<u>9,828</u>	<u>28,209</u>	<u>29,659</u>
Loss from operations	(7,201)	(9,828)	(28,164)	(29,659)
Interest and other (expense)/income, net	(951)	(84)	(1,901)	(20)
Net loss	<u>\$ (8,152)</u>	<u>\$ (9,912)</u>	<u>\$ (30,065)</u>	<u>\$ (29,679)</u>
Net loss per share – basic and diluted	<u>\$ (0.04)</u>	<u>\$ (0.06)</u>	<u>\$ (0.15)</u>	<u>\$ (0.18)</u>
Weighted average shares – basic and diluted	<u>214,714</u>	<u>163,614</u>	<u>196,528</u>	<u>161,749</u>

Mast Therapeutics, Inc.
Balance Sheet Data
(In thousands)

	September 30,		December 31,
	2016		2015
Cash, cash equivalents and investment securities	\$	26,950	\$ 40,981
Working capital		7,390	19,079
Total assets		40,118	54,217
Total liabilities		26,931	30,328
Stockholders' equity		13,187	23,889