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): August 5, 2013

Mast Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware	001-32157	84-1318182
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)
12390 El Camino Real, Suite 150, San Diego, California		92130
(Address of principal executive offices)		(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:

[ ] 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 August 5, 2013, Mast Therapeutics, Inc. issued a press release announcing its financial results for the three and six months ended June 30, 2013. 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 filed with this report.

The information set forth under Item 2.02 and in Exhibit 99.1 is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934 and is not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in any such filing.

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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.

August 5, 2013

By: /s/ Patrick L. Keran

Name: Patrick L. Keran
Title: President and Chief Operating Officer

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Exhibit Index

Exhibit No.	Description
99.1	Press release, dated August 5, 2013

MAST THERAPEUTICS REPORTS SECOND QUARTER 2013 FINANCIAL RESULTS

SAN DIEGO – August 5, 2013 – Mast Therapeutics, Inc. (NYSE MKT: MSTX) today reported financial results for the quarter ended June 30, 2013.

Brian M. Culley, Chief Executive Officer, said: "With a cash position of more than $50 million and active enrollment in our pivotal phase 3 study of MST-188, we believe we are well-positioned to bring to market the first new drug in sickle cell disease in over 15 years. We now have in excess of 15 of our planned 40 clinical sites open in the U.S. and we expect to begin opening sites outside the U.S. before the end of this year."

Second Quarter 2013 Operating Results

The Company's net loss for the second quarter of 2013 was $4.9 million, or $0.09 per share (basic and diluted), compared to a net loss of $4.2 million, or $0.09 per share (basic and diluted), for the same period in 2012.

Research and development (R&D) expenses for the second quarter of 2013 were $2.8 million, an increase of $0.7 million, or 35%, compared to $2.1 million for the same period in 2012. The increase was primarily due to a $1.7 million increase in external clinical study fees and expenses, offset by a $1.0 million decrease in external nonclinical study fees and expenses. The increase in external clinical study fees and expenses was primarily related to EPIC, the Company's phase 3 study of MST-188 in sickle cell disease, and the Company's thorough QT/QTc study of MST-188 in healthy volunteers, both of which were initiated in 2013. The decrease in external nonclinical study fees and expenses resulted primarily from a decrease in research-related manufacturing activities for ANX-514, which the Company discontinued during 2012.

Selling, general and administrative (SG&A) expenses for the second quarter of 2013 were $2.1 million, an increase of $0.2 million, or 12%, compared to $1.9 million for the same period in 2012. The increase resulted primarily from an increase in legal expenses and consulting fees.

Year-to-Date Operating Results

The Company's net loss for the six months ended June 30, 2013 was $10.5 million, or $0.21 per share (basic and diluted), compared to a net loss of $8.4 million, or $0.18 per share (basic and diluted), for the same period in 2012.

R&D expenses for the six months ended June 30, 2013 were $6.3 million, an increase of $2.0 million, or 45%, compared to $4.3 million for the same period in 2012. The increase was due to increases of $3.7 million in external clinical study fees and expenses, $0.2 million in personnel costs and $0.1 million in share-based compensation, offset by a $2.0 million decrease in external nonclinical study fees and expenses. The increase in external clinical study fees and expenses was primarily related to EPIC and the thorough QT/QTc study of MST-188. The decrease in external nonclinical study fees and expenses resulted primarily from a decrease in research-related manufacturing activities for ANX-514.

SG&A expenses for the six months ended June 30, 2013 were $4.2 million, an increase of $0.3 million, or 8%, compared to $3.9 million for the same period in 2012. The increase resulted primarily from a $0.2 million increase in legal expenses and consulting fees and a $0.1 million increase in personnel costs related to increased headcount.

Balance Sheet Highlights

As of June 30, 2013, the Company had cash, cash equivalents and short-term investments totaling $53.4 million. Stockholders' equity amounted to $57.9 million as of June 30, 2013.

About Mast Therapeutics

Mast Therapeutics, Inc. is a publicly traded biopharmaceutical company headquartered in San Diego, California. The Company is leveraging the MAST (Molecular Adhesion and Sealant Technology) platform, derived from over two decades of clinical, nonclinical and manufacturing experience with purified and non-purified poloxamers, to develop MST-188, its lead product candidate, for serious or life-threatening diseases with significant unmet needs. MST-188 is a cytoprotective, hemorheologic, anti-inflammatory and anti-thrombotic agent that has potential utility in diseases or conditions characterized by microcirculatory insufficiency (endothelial dysfunction and/or impaired blood flow).

The Company is enrolling subjects in EPIC, a pivotal phase 3 study of MST-188 in sickle cell disease, a genetic blood disorder in which sickled cells cause blood flow problems, which can lead to severe pain, irreversible organ damage, and early death. The Company plans to initiate a phase 2 clinical study of MST-188 in acute limb ischemia, a complication of peripheral arterial disease, in late 2013 or early 2014. More information can be found on the Company's web site at www.masttherapeutics.com.

Forward Looking Statements

Mast Therapeutics cautions you that statements included in this press release that are not a description of historical facts are forward-looking statements that are based on the Company's current expectations and assumptions. Such forward-looking statements include, but are not limited to, statements relating to the potential for MST-188 to be approved for patients with sickle cell disease and the timing of any such approval relative to other investigational drugs for sickle cell disease, progress with the EPIC study, including opening trial sites, the total number of sites planned and its prospects for generating evidence of efficacy and safety of MST-188 in vaso-occlusive crisis of sickle cell disease

sufficient for regulatory approval, and the Company's development plans for MST-188 in acute limb ischemia. Among the factors that could cause or contribute to material differences between the Company's actual results and the expectations indicated by the forward-looking statements are risks and uncertainties that include, but are not limited to: the uncertainty of outcomes in ongoing and future nonclinical and clinical studies of MST-188 and the risk that MST-188 may not demonstrate adequate safety, efficacy or tolerability in one or more such studies; delays in the commencement or completion of clinical studies, including as a result of difficulties in obtaining regulatory agency agreement on clinical development plans or clinical study design, opening trial sites, enrolling study subjects, manufacturing sufficient quantities of clinical trial material, being subject to a "clinical hold," or suspension or termination of a clinical study, including due to patient safety concerns or lack of funding; the potential for institutional review boards or the FDA or other regulatory agencies to require additional nonclinical or clinical studies prior to initiation of the planned phase 2 clinical study of MST-188 in acute limb ischemia; the risk that, even if clinical studies are successful, the FDA or other regulatory agencies may determine they are not sufficient to support a new drug application; the Company's reliance on contract research organizations (CROs), contract manufacturing organizations (CMOs), and other third parties to assist in the conduct of important aspects of development of MST-188, including clinical studies, and regulatory activities for MST-188 and that such third parties may fail to perform as expected; the Company's ability to obtain additional funding on a timely basis or on acceptable terms, or at all; the potential for the Company to delay, reduce or discontinue current and/or planned development activities, including clinical studies, partner MST-188 at inopportune times or pursue less expensive but higher-risk and/or lower return development paths if it is unable to raise sufficient additional capital as needed; the risk that the Company is not able to adequately protect its intellectual property rights relating to the MAST platform and MST-188 and prevent competitors from duplicating or developing equivalent versions of its product candidates, including MST-188; and other risks and uncertainties more fully described in the Company's press releases and periodic filings 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:
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[Tables to Follow]

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

	Three months ended June 30, (Unaudited)		Six months ended June 30, (Unaudited)	
	2013	**2012**	**2013**	**2012**
Total net revenue	$ —	$ —	$ —	$ —
Operating expenses:				
Research and development	2,837	2,108	6,280	4,318
Selling, general and administrative	2,100	1,871	4,213	3,916
Transaction-related expenses	7	206	35	92
Depreciation and amortization	9	37	18	67
Total operating expenses	4,953	4,222	10,546	8,393
Loss from operations	(4,953)	(4,222)	(10,546)	(8,393)
Interest and other income, net	12	11	24	29
Net loss	$ (4,941)	$ (4,211)	$ (10,522)	$ (8,364)
Net loss per share – basic and diluted	$ (0.09)	$ (0.09)	$ (0.21)	$ (0.18)
Weighted average shares – basic and diluted	53,750	47,716	50,028	47,716

Mast Therapeutics, Inc.
(A Development Stage Enterprise)
Balance Sheet Data
(In thousands)

	June 30, 2013 (Unaudited)	**December 31, 2012**
Cash, cash equivalents and short-term investments	$53,423	$36,511
Working capital	50,787	34,603
Total assets	63,836	46,972
Total liabilities	5,938	5,179
Stockholders' equity	57,898	41,792