Issuer Free Writing Prospectus Dated June 14, 2013 Filed Pursuant to Rule 433 Relating to Registration Statement on Form S-1 Registration No. 333-188870



## Mast Therapeutics, Inc. 50,000,000 Units, Each Consisting of One Share of Common Stock and One Warrant to Purchase 0.5 of a Share of Common Stock

Mast Therapeutics, Inc.

Securities offered by the issuer:	50,000,000 units, with each unit consisting of one share of common stock and one warrant to purchase 0.5 of a share of common stock. The warrants will be exercisable at \$0.65 per share and will expire five years from the date of issuance. The shares of common stock and warrants are immediately separable and will be issued separately.
Price per unit to the public:	\$0.50 per unit
Over-allotment option:	The underwriters have a 30-day option to purchase up to 7,500,000 additional units from Mast Therapeutics, Inc., exercisable in whole or in part to cover over-allotments, if any. If any such additional units are purchased, the underwriters will offer the additional units at the same price per unit to the public.
Gross proceeds of the offering:	\$25 million (not including the underwriters' over-allotment option, and excluding the proceeds, if any, from the exercise of the warrants issued pursuant to this offering).
Net proceeds of the offering	We estimate that the net proceeds to us from the sale of the units that we are offering will be approximately \$22.9 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by us,

Issuer:

Dilution:

basis, will be approximately \$26.4 million. As of March 31, 2013, Mast Therapeutics, Inc. had a per share net tangible book value of common stock of \$0.59. Based on the public offering price of \$0.50 per unit, and not accounting for the exercise of the underwriters' overallotment option or the proceeds, if any, from the exercise of the warrants issued pursuant to this offering, if you purchase units in this offering, you will suffer dilution of approximately \$0.07 per share in the net tangible book value of the common stock and, as a result of the offering, the per share net tangible book value of common stock to existing stockholders will increase by approximately \$0.02.

and excluding the proceeds, if any, from the exercise of the warrants issued pursuant to this offering. If the underwriters exercise their over-allotment option in full, we estimate that the net proceeds to us, calculated on the same Listing: The shares of common stock are listed on the NYSE MKT under the symbol "MSTX." We do not intend to list the warrants issued as part of this offering

on the NYSE MKT or any other nationally recognized securities exchange or

any other nationally recognized trading system.

Trade date:

Closing date:

June 14, 2013

June 19, 2013

CUSIP no.: 576314 108 (Common Stock)

576314 124 (Warrants)

Sole book-running manager: Piper Jaffray & Co.

Lead manager: Canaccord Genuity Inc.

We have filed a registration statement (including a prospectus) with the U.S. Securities and Exchange Commission (the "SEC") for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement, and other documents that we have filed with the SEC. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. Alternatively, copies of the prospectus may be obtained from Piper Jaffray & Co., Attention: Prospectus Department, 800 Nicollet Mall, J12S03, Minneapolis, MN 55402, via telephone at 800-747-3924 or email at prospectus@pjc.com