Mast Therapeutics, Inc.
Form S-4
February 10, 2017
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As filed with the Securities and Exchange Commission on February 10, 2017

Registration No. 333-

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-4

REGISTRATION STATEMENT

Under

The Securities Act of 1933

Mast Therapeutics, Inc.

(Exact name of Registrant as specified in its charter)

Delaware	**2834**	**84-1318182**
(State or other jurisdiction of incorporation or organization)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification Number)**

3611 Valley Centre Drive, Suite 500

San Diego, CA 92130

(858) 552-0866

(Address, including zip code, and telephone number, including area code, of Registrant s principal executive offices)

Brandi L. Roberts

Chief Financial Officer and Senior Vice President

Mast Therapeutics, Inc.

3611 Valley Centre Drive, Suite 500

San Diego, CA 92130

(858) 552-0866

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Michael S. Kagnoff, Esq.

Larry W. Nishnick, Esq.

DLA Piper LLP (US)

4365 Executive Drive, Suite 1100

San Diego, CA 92121

(858) 677-1400

Robert Neville

Chief Executive Officer

Savara Inc.

900 S. Capital of Texas Highway

Las Cimas IV, Suite 150

Austin, TX 78746

(512) 961-1891

J. Robert Suffoletta, Esq.

Robert T. Ishii, Esq.

Wilson Sonsini Goodrich & Rosati

Professional Corporation

900 S. Capital of Texas Highway

Las Cimas IV, Fifth Floor

Austin, TX 78746

(512) 338-5400

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement and the satisfaction or waiver of all other conditions under the Merger Agreement described herein.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Large accelerated filer Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

If applicable, place an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer)

Exchange Act Rule 14d-1(d) (Cross-Border Third-Party Tender Offer)

CALCULATION OF REGISTRATION FEE

Title of Each Class of Security Being Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee(3)
Common stock, $0.001 par value per share	871,659,402	N/A	$12,525,000	$1,452

(1) Relates to common stock, $0.001 par value per share, of Mast Therapeutics, Inc., a Delaware corporation (Mast), issuable to holders of capital stock, $0.001 par value per share, and warrants and options of Savara Inc., a Delaware corporation (Savara), in the proposed merger of Victoria Merger Corp., a Delaware corporation and a wholly-owned subsidiary of Mast, with and into Savara. The amount of Mast common stock to be registered is based on the estimated number of shares of Mast common stock that are expected to be issued pursuant to the merger, assuming an exchange ratio of 40.15 shares of Mast common stock for each outstanding share of Savara capital stock and for each option and warrant exercisable for shares of Savara capital stock, without giving effect to a reverse stock split of Mast common stock immediately prior to the merger. The estimated exchange ratio calculation contained herein is based upon Mast s capitalization immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted to account for the issuance of any additional shares of Mast common stock prior to the consummation of the merger.

(2) Estimated solely for purposes of calculating the registration fee in accordance with Rule 457(f) of the Securities Act of 1933, as amended, based upon the estimated book value of the Savara securities to be exchanged in the merger, as of immediately prior to the merger. Savara is a private company, and no market exists for its securities.

(3) This fee has been calculated pursuant to Section 6(b) of the Securities Act of 1933, as amended, at a rate equal to $115.90 per $1,000,000 of the proposed maximum aggregate offering price.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this proxy statement/prospectus/information statement is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This proxy statement/prospectus/information statement is not an offer to sell and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED FEBRUARY 10, 2017

PROPOSED MERGER

YOUR VOTE IS VERY IMPORTANT

To the Stockholders of Mast Therapeutics, Inc. and Savara Inc.:

Mast Therapeutics, Inc., or Mast, and Savara Inc., or Savara, have entered into an Agreement and Plan of Merger and Reorganization, or the Merger Agreement, pursuant to which a wholly owned subsidiary of Mast will merge with and into Savara, with Savara surviving as a wholly owned subsidiary of Mast, or the merger. The merger will result in a clinical-stage specialty pharmaceutical company focused on the development and commercialization of novel therapies for the treatment of serious or life-threatening rare respiratory diseases.

Immediately prior to the effective time of the merger, each share of Savara preferred stock will be converted into one share of Savara common stock. At the effective time of the merger, each share of Savara common stock will be converted into the right to receive approximately [ ] pre-split shares of Mast common stock, subject to adjustment to account for the effect of a reverse stock split of Mast common stock, at a ratio of [ ], to be implemented prior to the consummation of the merger as discussed in this proxy statement/prospectus/information statement. The post-split exchange ratio is approximately [ ]. Mast will assume restricted shares of Savara common stock and options to purchase Savara common stock that are outstanding and unexercised as of immediately prior to the effective time of the merger, and they will be converted into restricted shares of Mast common stock or options to purchase Mast common stock, respectively. Mast will assume warrants to purchase Savara common stock that are outstanding and unexercised as of immediately prior to the effective time of the merger, and they will be converted into warrants to purchase Mast common stock. Mast stockholders will continue to own and hold their existing shares of Mast common stock. Immediately after the merger, Savara stockholders, warrantholders and optionholders will own approximately 76% of the common stock of Mast, with Mast stockholders, warrantholders and optionholders, whose Mast equity will remain outstanding after the merger, holding approximately 24% of the common stock of Mast. The exchange ratio is determined pursuant to a formula described in more detail in the Merger Agreement and in the attached proxy statement/prospectus/information statement, and the [ ] pre-split figure, [ ] post-split figure and percentage ownership figures are estimates.

Shares of Mast common stock are currently listed on the NYSE MKT equities market under the symbol MSTX. Prior to consummation of the merger, Mast intends to file an initial listing application for the combined company with the NYSE MKT pursuant to NYSE MKT reverse merger rules. In connection with the merger, Mast will be renamed

Savara Inc. and expects to trade on the NYSE MKT under the symbol SVRA. On [ ], 2017, the last trading day before the date of this proxy statement/prospectus/information statement, the closing sale price of Mast common stock was $[ ] per share.

Mast is holding a special meeting of stockholders to obtain the stockholder approvals necessary to complete the merger and related matters. At the Mast special meeting, which will be held at [ ], local time, on [ ], 2017 at the offices of Mast Therapeutics, Inc. located at 3611 Valley Centre Drive, Suite 500, San Diego, California 92130, unless postponed or adjourned to a later date, Mast will ask its stockholders to, among other things, adopt the Merger Agreement thereby approving the merger and the issuance of Mast common stock, and approve an amendment and restatement of the Mast amended and restated certificate of incorporation (i) effecting a reverse stock split of Mast common stock, at a ratio of 1-for-[ ], which is referred to herein as the 1-for-[ ] reverse stock split, and (ii) changing the Mast corporate name to Savara Inc., and approve, on a non-binding advisory vote basis, compensation that will or may become payable by Mast to its named executive officers in connection with the merger, each as described in the accompanying proxy statement/prospectus/information statement.

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As described in the accompanying proxy statement/prospectus/information statement, certain Savara stockholders who in the aggregate beneficially own or control approximately 30% of the outstanding shares of Savara common stock on an as converted to common stock basis, and certain Mast stockholders who in the aggregate beneficially own or control less than one percent of the outstanding shares of Mast common stock, are parties to voting agreements with Mast and Savara, respectively, whereby such stockholders agreed to vote in favor of the adoption of the Merger Agreement and the transactions contemplated by the Merger Agreement, respectively, subject to the terms of the voting agreements. In addition, following the registration statement on Form S-4, of which this proxy statement/prospectus/information statement is a part, being declared effective by the U.S. Securities and Exchange Commission and pursuant to the conditions of the Merger Agreement, the Savara stockholders who are party to the voting agreements will each execute an action by written consent of the Savara stockholders, referred to herein as the written consent, adopting the Merger Agreement and approving the merger and the transactions contemplated by the Merger Agreement. No meeting of Savara stockholders to adopt the Merger Agreement and approve the merger and related transactions will be held; however, all Savara stockholders will have the opportunity to elect to adopt the Merger Agreement, thereby approving the merger and related transactions, by signing and returning to Savara a written consent.

After careful consideration, the Mast and Savara boards of directors have unanimously approved the Merger Agreement and the respective proposals referred to above, and each of the Mast and Savara boards of directors has unanimously determined that it is advisable to enter into the merger. The board of directors of Mast unanimously recommends that its stockholders vote FOR the proposals described in the accompanying proxy statement/prospectus/information statement, and the board of directors of Savara unanimously recommends that its stockholders sign and return the written consent indicating their approval of the merger and adoption of the Merger Agreement and related transactions to Savara.

More information about Mast, Savara and the proposed transaction is contained in this proxy statement/prospectus/information statement. Mast and Savara urge you to read the accompanying proxy statement/prospectus/information statement carefully and in its entirety. IN PARTICULAR, YOU SHOULD CAREFULLY CONSIDER THE MATTERS DISCUSSED UNDER RISK FACTORS BEGINNING ON PAGE [ ].

Mast and Savara are excited about the opportunities the merger brings to both Mast and Savara stockholders, and thank you for your consideration and continued support.

Brian M. Culley
Chief Executive Officer
Mast Therapeutics, Inc.

Robert Neville
Chief Executive Officer
Savara Inc.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this proxy

statement/prospectus/information statement. Any representation to the contrary is a criminal offense.

The accompanying proxy statement/prospectus/information statement is dated [ ], 2017, and is first being mailed to Mast and Savara stockholders on or about [ ], 2017.

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MAST THERAPEUTICS, INC.

3611 Valley Centre Drive, Suite 500

San Diego, California 92130

(858) 552-0866

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

To Be Held On [ ], 2017

Dear Stockholders of Mast:

On behalf of the board of directors of Mast Therapeutics, Inc., a Delaware corporation, or Mast, Mast is pleased to deliver this proxy statement/prospectus/information statement for the proposed merger between Mast and Savara Inc., a Delaware corporation, or Savara, pursuant to which Victoria Merger Corp., a wholly owned subsidiary of Mast, will merge with and into Savara, with Savara surviving as a wholly owned subsidiary of Mast. The special meeting of stockholders of Mast will be held on [ ], 2017 at [ ], local time, at the offices of Mast Therapeutics, Inc. located at 3611 Valley Centre Drive, Suite 500, San Diego, California 92130, for the following purposes:

1. To consider and vote upon a proposal to approve the merger and the issuance of Mast common stock pursuant to the Agreement and Plan of Merger and Reorganization, dated as of January 6, 2017, by and among Mast, Victoria Merger Corp. and Savara, a copy of which is attached as *Annex A* to the accompanying proxy statement/prospectus/information statement;

2. To approve the amendment and restatement of the amended and restated certificate of incorporation of Mast to effect a reverse stock split of Mast common stock, at a ratio of 1-for-[ ], in the form attached as *Annex D* to the accompanying proxy statement/prospectus/information statement;

3. To approve the amendment and restatement of the amended and restated certificate of incorporation of Mast to change the name Mast Therapeutics, Inc. to Savara Inc. in the form attached as *Annex D* to the accompanying proxy statement/prospectus/information statement;

4. To consider and vote upon a proposal to approve, on a non-binding advisory vote basis, compensation that will or may become payable by Mast to its named executive officers in connection with the merger;

5. To consider and vote upon an adjournment of the Mast special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Mast Proposal Nos. 1, 2, 3 and 4; and

6. To transact such other business as may properly come before the stockholders at the Mast special meeting or any adjournment or postponement thereof.

The board of directors of Mast has fixed [ ], 2017 as the record date for the determination of stockholders entitled to notice of, and to vote at, the Mast special meeting and any adjournment or postponement thereof. Only holders of record of shares of Mast common stock at the close of business on the record date are entitled to notice of, and to vote at, the Mast special meeting. At the close of business on the record date, Mast had [ ] shares of common stock

outstanding and entitled to vote.

Your vote is important. The affirmative vote of the holders of a majority of the shares of Mast common stock having voting power present in person or represented by proxy at the Mast special meeting, presuming a quorum is present, is required for approval of Mast Proposal Nos. 1, 4 and 5. The affirmative

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vote of the holders of a majority of shares of Mast common stock having voting power outstanding on the record date for the Mast special meeting is required for approval of Mast Proposal Nos. 2 and 3. Each of Proposal Nos. 1, 2 and 3 are conditioned upon each other. Therefore, the merger cannot be consummated without the approval of Proposal Nos. 1, 2 and 3.

Even if you plan to attend the Mast special meeting in person, Mast requests that you sign and return the enclosed proxy to ensure that your shares will be represented at the Mast special meeting if you are unable to attend.

By Order of the Mast Board of Directors,

Brian M. Culley

Chief Executive Officer

San Diego, California

[ ], 2017

THE MAST BOARD OF DIRECTORS HAS DETERMINED AND BELIEVES THAT EACH OF THE PROPOSALS OUTLINED ABOVE IS ADVISABLE TO, AND IN THE BEST INTERESTS OF, MAST AND ITS STOCKHOLDERS AND HAS APPROVED EACH SUCH PROPOSAL. THE MAST BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT MAST STOCKHOLDERS VOTE FOR EACH SUCH PROPOSAL.

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REFERENCES TO ADDITIONAL INFORMATION

This proxy statement/prospectus/information statement incorporates important business and financial information about Mast that is not included in or delivered with this document. You may obtain this information without charge through the Securities and Exchange Commission, or the SEC, website (www.sec.gov) or upon your written or oral request by contacting the Chief Financial Officer of Mast Therapeutics, Inc., 3611 Valley Centre Drive, Suite 500, San Diego, California 92130 or by calling (858) 552-0866.

To ensure timely delivery of these documents, any request should be made no later than [ ], 2017 to receive them before the special meeting.

For additional details about where you can find information about Mast, please see the section entitled Where You Can Find More Information in this proxy statement/prospectus/information statement.

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THERAPEUTICS, INC.

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QUESTIONS AND ANSWERS ABOUT THE MERGER

Except where specifically noted, the following information and all other information contained in this proxy statement/prospectus/information statement does not give effect to the proposed 1-for-[ ] reverse stock split described in Mast Proposal No. 2, beginning on page [ ] in this proxy statement/prospectus/information statement.

The following section provides answers to frequently asked questions about the merger. This section, however, provides only summary information. For a more complete response to these questions and for additional information, please refer to the cross-referenced sections.

Q: What is the merger?

A: Mast Therapeutics, Inc., or Mast, and Savara Inc., or Savara, have entered into an Agreement and Plan of Merger and Reorganization, dated as of January 6, 2017, or the Merger Agreement. The Merger Agreement contains the terms and conditions of the proposed business combination of Mast and Savara. Under the Merger Agreement, Victoria Merger Corp., a wholly owned subsidiary of Mast, or the Merger Sub, will merge with and into Savara, with Savara surviving as a wholly owned subsidiary of Mast. This transaction is referred to as the merger or the Merger.

At the effective time of the merger, each share of Savara common stock outstanding immediately prior to the effective time of the merger (excluding certain shares to be canceled pursuant to the Merger Agreement, and shares held by stockholders who have exercised and perfected appraisal rights or dissenters rights as more fully described in The Merger Appraisal Rights and Dissenters Rights below) will be converted into the right to receive approximately [ ] pre-split shares of Mast common stock, subject to adjustment to account for a reverse stock split of Mast common stock, at a ratio of one new share for every [ ] outstanding shares, to be implemented prior to the consummation of the merger. The post-split exchange ratio is approximately [ ]. As a result of the merger, holders of Savara stock, options and warrants are expected to own in the aggregate approximately 76% of Mast, and the Mast stockholders, optionholders and warrantholders are expected to own in the aggregate approximately 24% of Mast. The exchange ratio is determined pursuant to a formula described in more detail in the Merger Agreement and in this proxy statement/prospectus/information statement, and the [ ] pre-split figure, [ ] post-split figure and percentage ownership figures are estimates. In connection with the merger, Mast will change its corporate name to Savara Inc. as required by the Merger Agreement.

Q: What will Savara stockholders, warrantholders and holders of Savara equity awards receive in the merger?

A: As a result of the merger, Savara stockholders, warrantholders and holders of Savara equity awards will become entitled to receive shares of Mast common stock, warrants and equity awards equal to approximately 76% of the fully-diluted common stock of Mast. At the effective time of the merger, each share of Savara capital stock will be converted into the right to receive the number of shares of Mast common stock calculated based on the exchange ratio determined in accordance with the Merger Agreement. Savara outstanding warrants, or Savara Warrants, to purchase shares of Savara equity securities not exercised at or prior to the effective time of the merger will be converted into warrants to purchase Mast common stock, with the number of shares and exercise

price being appropriately adjusted to reflect the exchange ratio between Mast common stock and Savara common stock determined in accordance with the Merger Agreement.

At the effective time of the merger, each option to purchase Savara common stock, or Savara Options, that is outstanding and unexercised immediately prior to the effective time of the merger will be converted into and become an option to purchase Mast common stock, with the number of shares and exercise price being appropriately adjusted to reflect the exchange ratio between Mast common stock and Savara common stock determined in accordance with the Merger Agreement.

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At the effective time of the merger, each share of Savara restricted common stock, or Savara Restricted Shares, that is outstanding immediately prior to the effective time of the merger will be exchanged for a restricted share of Mast common stock, and will have, and be subject to, the same terms and conditions (including vesting terms) set forth in Savara s Stock Option Plan and applicable restricted share agreements relating thereto. The number of Mast restricted shares that will be exchanged for an award of Savara restricted shares will be appropriately adjusted to reflect the exchange ratio between Mast common stock and Savara common stock determined in accordance with the Merger Agreement.

For a more complete description of what Savara stockholders, warrantholders and holders of Savara equity awards will receive in the merger, please see the sections entitled Market Price and Dividend Information and The Merger Agreement Merger Consideration in this proxy statement/prospectus/information statement.

Q: What will Mast stockholders, warrantholders and holders of Mast equity awards receive in the merger?

A: Mast stockholders, warrantholders and holders of Mast equity awards will not receive anything as a result of the merger, but will continue to hold the same amount of Mast common stock, warrants to purchase Mast common stock and Mast equity awards held immediately prior to the merger, as appropriately adjusted for the reverse stock split.

Q: What will happen to Mast if, for any reason, the merger does not close?

A: If, for any reason, the merger does not close, the Mast board of directors (the Mast Board) may elect to, among other things, attempt to complete another strategic transaction like the merger, attempt to sell or otherwise dispose of the various assets of Mast or continue to operate the business of Mast. If Mast decides to dissolve and liquidate its assets, Mast would be required to pay all of its debts and contractual obligations, and to set aside certain reserves for potential future claims, and there can be no assurances as to the amount or timing of available cash left to distribute to stockholders after paying the debts and other obligations of Mast and setting aside funds for reserves.

Q: Why are the two companies proposing to merge?

A: Following the merger, Mast and Savara believe the combined organization will advance a diversified pipeline of novel therapies for the treatment of serious or life-threatening rare respiratory diseases. Mast and Savara believe that the combined organization will have the following potential advantages: (i) a diversified, late-stage product development pipeline with important forthcoming milestones; (ii) an experienced management team; and (iii) the potential to access additional sources of capital. For a discussion of Mast and Savara reasons for the merger, please see the section entitled The Merger Mast Reasons for the Merger and The Merger Savara Reasons for the Merger in this proxy statement/prospectus/information statement.

Q: Why am I receiving this proxy statement/prospectus/information statement?

A: You are receiving this proxy statement/prospectus/information statement because you have been identified as a stockholder of Mast or Savara as of the applicable record date, and you are entitled, as applicable, to vote at the Mast stockholder meeting to approve among other things the merger and the issuance of shares of Mast common stock pursuant to the Merger Agreement, or sign and return the Savara written consent to adopt the Merger Agreement and approve the merger. This document serves as:

a proxy statement of Mast used to solicit proxies for its special meeting of stockholders;

a prospectus of Mast used to offer shares of Mast common stock in exchange for shares of Savara common stock in the merger and issuable upon exercise of Savara options and warrants; and

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an information statement of Savara used to solicit the written consent of its stockholders for the adoption of the Merger Agreement and the approval of the merger and related transactions.

Q: What is required to consummate the merger?

A: To consummate the merger, Mast stockholders must approve the issuance of Mast common stock pursuant to the Merger Agreement. In addition, the Merger Agreement anticipates approval of an amendment and restatement of the amended and restated certificate of incorporation of Mast effecting (i) the 1-for-[ ] reverse stock split, and (ii) the change in Mast s name to Savara Inc. Moreover, Savara stockholders must approve the merger. The approval of the merger and the issuance of Mast common stock pursuant to the Merger Agreement by the stockholders of Mast requires the affirmative vote of the holders of a majority of the shares of Mast common stock having voting power present in person or represented by proxy at the Mast special meeting for the issuance of shares of Mast common stock in the merger, presuming a quorum is present at the meeting. The approval of the 1-for-[ ] reverse stock split and the change of Mast s name require the affirmative vote of the holders of a majority of shares of Mast common stock having voting power outstanding on the record date for the Mast special meeting. The approval of the 1-for-[ ] reverse stock split is required in order to authorize Mast to implement the reverse stock split and to ensure Mast may issue a sufficient amount of Mast common stock to consummate the merger. In addition, the reverse stock split is necessary to ensure that the post-merger trading price of Mast s common stock satisfies the initial listing requirements of the NYSE MKT applicable to the combined company. Therefore, if the requisite stockholders of Mast approve the merger and the issuance of Mast common stock pursuant to the Merger Agreement but do not approve the 1-for-[ ] reverse stock split, it is possible that the merger may not be consummated.

The adoption of the Merger Agreement and the approval of the merger and related transactions by the stockholders of Savara require the affirmative votes of the holders of (i) a majority of the outstanding Savara common stock and preferred stock, voting together as one class, and (ii) a majority of the outstanding shares of Savara preferred stock. In addition to the requirement of obtaining such stockholder approvals, each of the other closing conditions set forth in the Merger Agreement must be satisfied or waived.

Certain Savara stockholders who in the aggregate beneficially own or control approximately 30% of the outstanding shares of Savara common stock on an as converted to common stock basis, and certain Mast stockholders who in the aggregate beneficially own or control less than one percent of the outstanding shares of Mast common stock, are parties to voting agreements with Mast and Savara, respectively, whereby such stockholders agreed to vote in favor of the adoption of the Merger Agreement and the transactions contemplated by the Merger Agreement, respectively, subject to the terms of the voting agreements. In addition, following the registration statement on Form S-4, of which this proxy statement/prospectus/information statement is a part, being declared effective by the U.S. Securities and Exchange Commission and pursuant to the conditions of the Merger Agreement, Savara stockholders who are party to the voting agreements will each execute written consents approving the merger and related transactions. Stockholders of Savara, including those who are parties to voting agreements, are being requested to execute written consents providing such approvals.

For a more complete description of the closing conditions under the Merger Agreement, you are urged to read the section entitled The Merger Agreement Conditions to the Completion of the Merger in this proxy statement/prospectus/information statement.

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Q: Who will be the directors of Mast following the merger?

A: Immediately following the merger, the Mast Board is expected to be composed of seven directors, with five to be designated by Savara and two to be designated by Mast. Such directors are identified in the table below.

Name	Current Principal Affiliation
Robert Neville	Chairman and Chief Executive Officer, Savara
Nevan Elam	Chairman, Chief Executive Officer and President of AntriaBio, Inc.
Richard J. Hawkins	Chief Executive Officer and President of Lumos Pharma, Inc.
Yuri Pikover	Managing Director of 37 Ventures, LLC
Joseph S. McCracken	Roche Global Head of Business Development and Licensing (retired)
[ ]	
[ ]	

Q: Who will be the executive officers of Mast immediately following the merger?

A: Immediately following the merger, the executive management team of Mast is expected to be composed solely of the members of the Savara executive management team prior to the merger as set forth below:

Name	Title
Robert Neville	Chief Executive Officer
Taneli Jouhikainen	Chief Operating Officer
David Lowrance	Chief Financial Officer

Q: What are the potential material U.S. federal income tax consequences of the merger to Savara stockholders?

A: Each of Mast and Savara intends the merger to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the Code). However, completion of the merger is not conditioned upon receipt of an opinion from counsel that the merger qualifies as a reorganization, and the merger will occur even if the merger does not qualify as a reorganization.

Assuming the merger qualifies as a reorganization, in general, the material U.S. federal income tax consequences to U.S. Holders (as defined herein) of Savara common stock (other than any such holders exercising dissenters rights) are expected to be as follows:

Each Savara stockholder should not generally recognize gain or loss upon the exchange of Savara common stock for Mast common stock pursuant to the merger, except to the extent of cash received in lieu of a fractional share of Mast common stock as described below; and

Each Savara stockholder should recognize gain or loss to the extent any cash received in lieu of a fractional share of Mast common stock exceeds or is less than the basis of such fractional share.

Tax matters are very complicated, and the tax consequences of the merger to a particular Savara stockholder will depend on such stockholder s circumstances. Accordingly, you should consult your tax advisor for a full understanding of the tax consequences of the merger to you, including the applicability and effect of U.S. federal, state, local and non-U.S. income and other tax laws. For more information, please see the section entitled The Merger Considerations with Respect to U.S. Federal Income Tax Consequences of the Merger beginning on page [ ].

Q: As a Mast stockholder, how does the Mast Board recommend that I vote?

A: After careful consideration, the Mast Board unanimously recommends that Mast stockholders vote:

FOR Proposal No. 1 to approve the merger and the issuance of shares of common stock of Mast in the merger;

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FOR Proposal No. 2 to approve the amendment and restatement of the amended and restated certificate of incorporation of Mast to effect a reverse stock split of Mast common stock, at a ratio of 1-for-[ ];

FOR Proposal No. 3 to approve the amendment and restatement of the amended and restated certificate of incorporation of Mast to change the name of Mast Therapeutics, Inc. to Savara Inc. ;

FOR Proposal No. 4 to consider and vote upon a proposal to approve, on a non-binding advisory vote basis, compensation that will or may become payable by Mast to its named executive officers in connection with the merger; and

FOR Proposal No. 5 to adjourn the special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of Proposal Nos. 1, 2, 3 and 4.

Q: What is the compensation that will or may become payable by Mast to its named executive officers in connection with the merger for purposes of this advisory vote?

A: The compensation that will or may become payable by Mast to its named executive officers in connection with the merger includes: (i) based on the terms of the severance agreements Mast entered into with its executive officers in March 2016, cash severance payments, cash payments intended to cover health insurance costs for a period of time post-termination and the acceleration of outstanding equity awards as a result of the planned termination of the named executive officers in connection with the consummation of the merger; (ii) incentive awards to Mast s named executive officers payable 50% in a single sum cash payment and 50% in a grant of restricted stock units (RSUs) approved by the Mast Board in January 2017 in order to retain, reward and incentivize these individuals for their continuing efforts to help Mast achieve its goals through the merger which will become payable or vest, as applicable, upon consummation of the merger; and (iii) certain RSUs granted in January 2017 and held by Mast s named executive officers provide that such RSUs will vest upon consummation of the merger and that their outstanding unexercised stock options will be cancelled. Based on the terms of their respective severance agreements, outstanding equity awards and Mast s short-term incentive program, Mast s executive officers will be entitled to receive a total value of approximately $2.5 million (collectively, not individually) in connection with the consummation of the merger and the associated termination of their employment from Mast, based on data available as of December 31, 2016. For further detail, see the section titled Mast Proposal No. 4: Advisory Non-Binding Vote on Merger-Related Executive Compensation Arrangements.

Q: What will happen if stockholders do not approve the compensation that will or may become payable by Mast to its named executive officers in connection with the merger at the special meeting?

A: Approval of the compensation that will or may become payable by Mast to its named executive officers in connection with the merger (and their associated termination from Mast) is not a condition to completion of the merger. The vote with respect to the compensation that will or may become payable by Mast to its named executive officers in connection with the merger is an advisory vote and will not be binding on Mast. Further, the severance agreements, equity awards and other arrangements governing the

consideration the Mast named executive officers have received or will be eligible to receive in the merger are contractual in nature and not, by their terms, subject to stockholder approval. Accordingly, regardless of the outcome of the advisory vote, if the Merger Agreement is adopted by the stockholders and the merger is completed, Mast s named executive officers will be eligible to receive the compensation that is based on or otherwise relates to the merger and their associated termination from Mast in accordance with the terms and conditions applicable to the employment and separation agreements, equity awards and other arrangements Mast has entered into with the named executive officers.

Q: As a Savara stockholder, how does the Savara board of directors recommend that I vote?

A: After careful consideration, the Savara board of directors (the Savara Board) unanimously recommends that Savara stockholders execute the written consent indicating their vote in favor of the adoption of the Merger Agreement and the approval of the merger and the transactions contemplated thereby.

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Q: What risks should I consider in deciding whether to vote in favor of the merger or to execute and return the written consent, as applicable?

A: You should carefully review the section of this proxy statement/prospectus/information statement entitled Risk Factors, which sets forth certain risks and uncertainties related to the merger, risks and uncertainties to which the combined organization s business will be subject, and risks and uncertainties to which each of Mast and Savara, as an independent company, is subject.

Q: When do you expect the merger to be consummated?

A: The merger is anticipated to occur promptly after the Mast special meeting to be held on [ ], 2017. For more information, please see the section entitled The Merger Agreement Conditions to the Completion of the Merger in this proxy statement/prospectus/information statement.

Q: What do I need to do now?

A: Mast and Savara urge you to read this proxy statement/prospectus/information statement carefully, including its annexes, and to consider how the merger affects you.

If you are a stockholder of Mast, you may provide your proxy instructions in one of two different ways. First, you can mail your signed proxy card in the enclosed return envelope. Second, you may also provide your proxy instructions via the Internet or telephone by following the instructions on your proxy card or voting instruction form. Please provide your proxy instructions only once, unless you are revoking a previously delivered proxy instruction, and as soon as possible so that your shares can be voted at the special meeting of Mast stockholders.

If you are a stockholder of Savara, you may execute and return your written consent to Savara in accordance with the instructions provided.

Q: What happens if I do not return a proxy card or otherwise provide proxy instructions, as applicable?

A: If you are a Mast stockholder, the failure to return your proxy card or otherwise provide proxy instructions will reduce the aggregate number of votes required to approve Mast Proposals Nos. 1, 4 and 5 and will have the same effect as voting against Mast Proposal Nos. 2 and 3, and your shares will not be counted for purposes of determining whether a quorum is present at the Mast special meeting.

Q: May I vote in person at the special meeting of stockholders of Mast?

A: If your shares of Mast common stock are registered directly in your name with the Mast transfer agent, you are considered to be the stockholder of record with respect to those shares, and the proxy materials and proxy card

are being sent directly to you by Mast. If you are a Mast stockholder of record, you may attend the special meeting of Mast stockholders and vote your shares in person. Even if you plan to attend the Mast special meeting in person, Mast requests that you sign and return the enclosed proxy to ensure that your shares will be represented at the Mast special meeting if you are unable to attend. If your shares of Mast common stock are held in a brokerage account or by another nominee, you are considered the beneficial owner of shares held in street name, and the proxy materials are being forwarded to you by your broker or other nominee together with a voting instruction card. As the beneficial owner, you are also invited to attend the special meeting of Mast stockholders. Because a beneficial owner is not the stockholder of record, you may not vote these shares in person at the Mast special meeting unless you obtain a proxy from the broker, trustee or nominee that holds your shares, giving you the right to vote the shares at the meeting.

Q: When and where is the special meeting of Mast stockholders being held?

A: The special meeting of Mast stockholders will be held at the offices of Mast located at 3611 Valley Centre Drive, Suite 500, San Diego, California 92130, at [ ] local time, on [ ], 2017. Subject to space availability, all Mast stockholders as of the record date, or their duly appointed proxies, may attend the meeting. Since seating is limited, admission to the meeting will be on a first-come, first-served basis.

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Q: If my Mast shares are held in street name by my broker, will my broker vote my shares for me?

A: Unless your broker has discretionary authority to vote on certain matters, your broker will not be able to vote your shares of Mast common stock on matters requiring discretionary authority without instructions from you. Brokers are not expected to have discretionary authority to vote for Mast Proposals No. 1, 2, 3 or 4. To make sure that your vote is counted, you should instruct your broker to vote your shares, following the procedures provided by your broker.

Q: May I change my vote after I have submitted a proxy or provided proxy instructions?

A: Mast stockholders of record, other than Mast stockholders who have signed voting agreements, may change their vote at any time before their proxy is voted at the Mast special meeting in one of three ways. First, a stockholder of record of Mast can send a written notice to the Secretary of Mast stating that it would like to revoke its proxy. Second, a stockholder of record of Mast can submit new proxy instructions either on a new proxy card or via the Internet or telephone. Third, a stockholder of record of Mast can attend the Mast special meeting and vote in person. Attendance alone will not revoke a proxy. If a Mast stockholder of record or a stockholder who owns Mast shares in street name has instructed a broker to vote its shares of Mast common stock, the stockholder must follow directions received from its broker to change those instructions.

Q: Who is paying for this proxy solicitation?

A: Mast and Savara will share equally the cost of printing and filing of this proxy statement/prospectus/information statement and the proxy card. Arrangements will also be made with brokerage firms and other custodians, nominees and fiduciaries who are record holders of Mast common stock for the forwarding of solicitation materials to the beneficial owners of Mast common stock. Mast will reimburse these brokers, custodians, nominees and fiduciaries for the reasonable out-of-pocket expenses they incur in connection with the forwarding of solicitation materials. Mast has retained Advantage Proxy to assist it in soliciting proxies using the means referred to above. Mast will pay the fees of Advantage Proxy, which Mast expects to be approximately $10,000, plus reimbursement of out-of-pocket expenses.

Q: Who can help answer my questions?

A: If you are a Mast stockholder and would like additional copies, without charge, of this proxy statement/prospectus/information statement or if you have questions about the merger, including the procedures for voting your shares, you should contact Mast s proxy solicitor:

ADVANTAGE PROXY

(877) 870-8565 (toll free)

(206) 870-8565 (collect)

ksmith@advantageproxy.com

If you are a Savara stockholder and would like additional copies, without charge, of this proxy statement/prospectus/information statement or if you have questions about the merger, including the procedures for voting your shares, you should contact:

Savara Inc.

900 S. Capital of Texas Highway

Las Cimas IV, Suite 150

Austin, Texas 78746

Tel: (512) 961-1891

Attn: Chris Marich, Head of Business Operations

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PROSPECTUS SUMMARY

This summary highlights selected information from this proxy statement/prospectus/information statement and may not contain all of the information that is important to you. To better understand the merger, the proposals being considered at the Mast special meeting and the Savara stockholder actions that are the subject of the written consent, you should read this entire proxy statement/prospectus/information statement carefully, including the Merger Agreement and the other annexes to which you are referred herein. For more information, please see the section entitled Where You Can Find More Information in this proxy statement/prospectus/information statement.

The Companies

Mast Therapeutics, Inc.

3611 Valley Centre Drive, Suite 500

San Diego, California 92130

(858) 552-0866

Mast Therapeutics, Inc., or Mast, is a biopharmaceutical company headquartered in San Diego, California. Mast s lead product candidate, AIR001, is a sodium nitrite solution for intermittent inhalation via nebulization for the treatment of heart failure with preserved ejection fraction (HFpEF), which is currently in Phase 2 clinical development.

Savara Inc.

900 S. Capital of Texas Highway

Las Cimas IV, Suite 150

Austin, Texas 78746

Tel: (512) 961-1891

Savara Inc., or Savara, is a clinical-stage specialty pharmaceutical company focused on the development and commercialization of novel therapies for the treatment of serious or life-threatening rare respiratory diseases. Savara s pipeline comprises AeroVanc, a Phase 3 ready inhaled vancomycin, and Molgradex, a Phase 2/3 stage inhaled granulocyte-macrophage colony-stimulating factor, or GM-CSF. Savara s strategy involves expanding its pipeline of best-in-class products through indication expansion, strategic development partnerships and product acquisitions, with the goal of becoming a leading company in its field. Savara s management team has significant experience in orphan drug development and pulmonary medicine, in identifying unmet needs, creating and acquiring new product candidates, and effectively advancing them to approvals and commercialization.

Savara acquired the assets of Copenhagen-based Serendex Pharmaceuticals A/S (Serendex) on July 15, 2016. Serendex was established in 2008 and listed on the Oslo Stock Exchange in 2014. Serendex operated as a public company until their delisting on May 4, 2016, ahead of its acquisition by Savara.

Victoria Merger Corp.

3611 Valley Centre Drive, Suite 500

San Diego, California 92130

(858) 552-0866

Victoria Merger Corp., or Merger Sub, is a wholly owned subsidiary of Mast and was formed solely for the purposes of carrying out the merger.

The Merger (see page [ ])

If the merger is completed, Merger Sub will merge with and into Savara, with Savara surviving as a wholly owned subsidiary of Mast.

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Immediately after the merger, subject to adjustments to reflect certain events that could occur prior to closing of the merger, Savara stockholders, option holders and warrant holders will own approximately 76% of the fully-diluted common stock of post-merger Mast, with Mast stockholders, option holders and warrant holders holding approximately 24% of the fully-diluted common stock of post-merger Mast. Savara outstanding warrants to purchase shares of Savara equity securities not exercised at or prior to the effective time of the merger will be converted into warrants to purchase Mast common stock. Mast will assume options to purchase Savara common stock that are outstanding and unexercised as of immediately prior to the effective time of the merger, and they will be converted into options to purchase Mast common stock. Mast will assume unvested shares of Savara restricted stock that are outstanding immediately prior to the effective time of the merger, and they will be converted into restricted shares of Mast common stock. The exchange ratio is determined pursuant to a formula described in more detail in the Merger Agreement and in this proxy statement/prospectus/information statement, and the percentage ownership figures are estimates. The foregoing percentages assume that the exchange ratio is not adjusted, as described in The Merger Merger Consideration and Adjustment below.

For a more complete description of the merger exchange ratio, please see the section entitled The Merger Agreement in this proxy statement/prospectus/information statement.

The closing of the merger will occur no later than three business days after the last of the conditions to the merger has been satisfied or waived, or at another time as Mast and Savara agree. Mast and Savara anticipate that the consummation of the merger will occur promptly after the Mast special meeting. However, because the merger is subject to a number of conditions, neither Mast nor Savara can predict exactly when the closing will occur or if it will occur at all. In connection with the merger, assuming that Mast receives the required stockholder approval of Mast Proposal No. 3, Mast will be renamed Savara Inc.

The reasons for the merger are described on pages [ ] and [ ].

Opinion of the Mast Financial Advisor (see page [ ])

Roth Capital Partners LLC (Roth), the financial advisor of Mast, delivered to the Mast Board a written opinion dated January 6, 2017, addressed to the Mast Board, to the effect that, as of such date and based on and subject to the assumptions, factors, qualifications and limitations described in the opinion, the consideration to be paid by Mast in the merger was fair, from a financial point of view, to Mast. The full text of this written opinion to the Mast Board, which describes, among other things, the procedures followed, assumptions made, qualifications and limitations on the review undertaken and other matters considered by Roth in preparing its opinion, is attached as Annex B to this proxy statement/prospectus/information statement and is incorporated by reference in its entirety into this proxy statement/prospectus/information statement. Holders of Mast common stock are encouraged to read the opinion carefully in its entirety. The Roth opinion was prepared solely for the information of the Mast Board for use in connection with its consideration of the merger. It does not address any other aspect of the proposed merger or any alternative to the merger. Neither Roth s written opinion nor the summary of its opinion and the related analyses set forth in this proxy statement/prospectus/information statement are intended to be, and they do not constitute, advice or a recommendation to any stockholder as to how such stockholder should act or vote with respect to any matter relating to the merger or any other matter.

Overview of the Merger Agreement and Agreements Related to the Merger Agreement

Merger Consideration (see page [ ])

Immediately prior to the effective time of the merger, each share of Savara preferred stock outstanding at such time will be converted into shares of Savara common stock at a ratio determined in accordance with the Savara certificate of incorporation then in effect. At the effective time of the merger:

each share of Savara capital stock issued and outstanding immediately prior to the effective time of the merger will be converted into and represent the right to receive a number of shares of Mast common stock equal to the exchange ratio, as described below; and

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each Savara Option will be assumed by Mast and will become an option to that number of shares of the common stock of Mast, or Mast Option, multiplied by the exchange ratio (and rounding the resulting number down to the nearest whole share), at an exercise price equal to the per share exercise price of such Savara Option divided by the exchange ratio (and rounding the resulting number up to the nearest whole cent);

each award of Savara Restricted Shares will be assumed by Mast and will become an award of a number of restricted shares of Mast, or Mast Restricted Shares, subject to vesting, determined by multiplying the number of Savara Restricted Shares subject to the award by the exchange ratio (and rounding the resulting number down to the nearest whole share); and

each Savara Warrant will be assumed by Mast and will become a warrant to purchase to that number of shares of the common stock of Mast, or Mast Warrants, multiplied by the exchange ratio (and rounding the resulting number down to the nearest whole share), at an exercise price equal to the per share exercise price of such Savara Warrant divided by the exchange ratio (and rounding the resulting number up to the nearest whole cent).

Immediately after the merger, based on the exchange ratio, Savara stockholders, warrantholders and optionholders will own approximately 76% of the fully-diluted common stock of Mast with Mast stockholders, optionholders and warrantholders holding approximately 24% of the fully-diluted common stock of Mast. The exchange ratio is determined pursuant to a formula described in more detail in the Merger Agreement and in this proxy statement/prospectus/information statement.

There will be no adjustment to the total number of shares of Mast common stock that Savara stockholders will be entitled to receive for changes in the market price of Mast common stock. Accordingly, the market value of the shares of Mast common stock issued pursuant to the merger will depend on the market value of the shares of Mast common stock at the time the merger closes, and could vary significantly from the market value on the date of this proxy statement/prospectus/information statement.

Treatment of Savara Options and Savara Restricted Shares (see page [ ])

At the effective time of the merger, each Savara Option, whether vested or not vested, will be converted into a Mast Option and each Mast Option may be exercised solely for shares of Mast common stock. Mast will assume the Savara Stock Option Plan. The number of shares of Mast common stock subject to each Mast Option will be determined by multiplying (i) the number of shares of Savara common stock that were subject to the underlying Savara Option by (ii) the exchange ratio, with the resulting number rounded down to the nearest whole number of shares of Mast common stock. The per share exercise price for the Mast common stock subject to such Mast Option will be determined by dividing (i) the per share exercise price of the underlying Savara Option by (ii) the exchange ratio, with the resulting number rounded up to the nearest whole cent.

Any restrictions on the exercise of assumed Savara Options will continue in full force and effect following the conversion and the term, exercisability, vesting schedules, status as an incentive stock option under Section 422 of the Code, if applicable, and other provisions of the assumed Savara Options will generally remain unchanged; provided, that any Savara Options assumed by Mast may be subject to adjustment to reflect changes in Mast s capitalization after the effective time of the merger and that the Mast Board or any committee thereof will succeed to the authority of the Savara Board with respect to each assumed Savara Option.

At the effective time, Savara Restricted Share will be exchanged for a Mast Restricted Share and each Mast Restricted Share will have, and be subject to, the same terms and conditions (including vesting terms) set forth in Savara s Stock Option Plan and applicable Savara Restricted Share agreements relating thereto, as in effect immediately prior to the effective time of the merger. The number of Mast Restricted Shares that will be exchanged for an award of Savara Restricted Shares will equal the number of Savara Restricted Shares

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outstanding subject to such award immediately prior to the effective time of the merger multiplied by the exchange ratio, with the result rounded down to the nearest whole number of shares of Mast common stock.

Treatment of Savara Warrants (see page [ ])

At the effective time of the merger, each Savara Warrant will be converted into a Mast Warrant and each Mast Warrant may be exercised solely for shares of Mast common stock. The number of shares of Mast common stock subject to each Mast Warrant will be determined by multiplying (i) the number of shares of Savara common stock that were subject to the underlying Savara Warrant by (ii) the exchange ratio, with the resulting number rounded down to the nearest whole number of shares of Mast common stock. The per share exercise price for the Mast common stock subject to such Mast Warrant will be determined by dividing (i) the per share exercise price of the underlying Savara Warrant by (ii) the exchange ratio, with the resulting number rounded up to the nearest whole cent.

Any restrictions on the exercise of assumed Savara Warrants will continue in full force and effect following the conversion and the term, exercisability and other provisions of the assumed Savara Warrants will otherwise remain unchanged; provided, that any Savara Warrants assumed by Mast may be subject to adjustment to reflect changes in Mast s capitalization after the effective time of the merger.

Conditions to the Completion of the Merger (see page [ ])

To consummate the merger, Mast stockholders must approve the merger and the issuance of shares of Mast common stock in the merger. In addition, the Merger Agreement anticipates approval of an amendment and restatement of the amended and restated certificate of incorporation of Mast (i) effecting the proposed [ ] reverse stock split, and (ii) effecting a change of the Mast name to Savara Inc. Moreover, the Savara stockholders must adopt the Merger Agreement and approve the merger. In addition to obtaining such stockholder approvals and appropriate regulatory approvals, each of the other closing conditions set forth in the Merger Agreement must be satisfied or waived.

No Solicitation (see page [ ])

Each of Mast and Savara agreed that, subject to limited exceptions, Mast and Savara will not, and will not authorize or permit any of their respective subsidiaries or any of their respective controlled affiliates, officers, directors, employees, partners, attorneys, accountants, advisors, agents or representatives of such parties or of any such party s subsidiaries or other controlled affiliates to, directly or indirectly:

- solicit, initiate, knowingly encourage, induce or facilitate the making, submission or announcement of any acquisition proposal, as defined below, or take any action that would reasonably be expected to lead to an acquisition proposal;
- furnish any nonpublic information regarding it to any person in connection with or in response to an acquisition proposal or an inquiry or indication of interest that could lead to an acquisition proposal;
- engage in discussions or negotiations with any person with respect to any acquisition proposal;

approve, endorse or recommend an acquisition proposal; or

enter into any letter of intent or similar document or any agreement contemplating or otherwise relating to an acquisition transaction, as defined in the Merger Agreement.

However, before obtaining the applicable Mast or Savara stockholder approvals required to adopt the Merger Agreement, each party may furnish nonpublic information regarding such party and its respective

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subsidiaries to, may enter into discussions with, or facilitate or cooperate with the submission of an acquisition proposal made by any person in response to any such acquisition proposal, that after consultation with a financial advisor and outside legal counsel, such party s board of directors determines in good faith is, or would reasonably be expected to result in a superior offer, as defined in the Merger Agreement, if:

such acquisition proposal did not result from a breach of the no solicitation provisions of the Merger Agreement described above such party s board of directors concludes in good faith, after having taken into account the advice of its outside legal counsel, that such action is required in order for the board of directors to comply with its fiduciary duty obligations to its stockholders under applicable legal requirements;

at least two business days prior to furnishing any information or entering into discussions with a third party, such party must (i) give the other party written notice of the identity of the third party, the terms and conditions of any proposals or offers (including, if applicable, copies of any written requests, proposals or offers, including proposed agreements) made thereby and of that party s intention to furnish information to, or enter into discussions with such third party and (ii) such party must receive from the third party an executed confidentiality agreement on terms no less favorable to such party than those in the confidentiality agreement between Mast and Savara, with such new confidentiality agreement to contain customary limitations on the use and disclosure of all nonpublic written and oral information furnished to such third party on or behalf of such party (as well as customary standstill provisions if Mast is the party entering into a new confidentiality agreement with the third party); and

substantially contemporaneous with furnishing of any information to a third party, such party furnishes the same information to the other party to the extent not previously furnished.

Termination of the Merger Agreement (see page [ ])

Either Mast or Savara can terminate the Merger Agreement under certain circumstances, which would prevent the merger from being consummated.

Termination Fee (see page [ ])

If the Merger Agreement is terminated under certain circumstances, Mast will be required to pay Savara a termination fee of $1.8 million, Savara will be required to pay Mast a termination fee of $2.5 million, or, Mast or Savara will be required in some circumstances, to reimburse the other party for expenses incurred in connection with the merger, up to a maximum of $250,000.

Voting Agreements (see page [ ])

Certain Savara securityholders that beneficially own or control approximately 30% of the voting power of Savara s outstanding capital stock on an as-converted to common stock basis as of December 31, 2016 entered into voting agreements pursuant to which, among other things, they agreed to vote all of their shares of Savara capital stock in favor of the adoption of the Merger Agreement and the approval of the merger and the other transactions contemplated by the Merger Agreement, and any other matter that is reasonably necessary to facilitate the consummation of the merger and the other transactions contemplated by the Merger Agreement, against any Acquisition Proposal, as defined in the Merger Agreement, and against any other matter that would reasonably be expected to impede, interfere

with, delay, postpone or adversely affect the merger or any of the transactions contemplated by the Merger Agreement.

Certain Mast securityholders that beneficially own or control less than one percent of the outstanding shares of Mast common stock as of February 2, 2017 entered into voting agreements pursuant to which, among other

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things, they agreed to vote all their shares of Mast capital stock in favor of the adoption of the Merger Agreement and the approval of the merger and the other transactions contemplated by the Merger Agreement, and any other matter that is reasonably necessary to facilitate the consummation of the merger and the other transactions contemplated by the Merger Agreement, against any Acquisition Proposal, as defined in the Merger Agreement, and against any other matter that would reasonably be expected to impede, interfere with, delay, postpone or adversely affect the merger or any of the transactions contemplated by the Merger Agreement.

Lock-Up Agreements (see page [ ])

The Savara securityholders and Mast securityholders that entered into voting agreements also entered into lock-up agreements with Savara and Mast, respectively, pursuant to which they agreed not to, except in limited circumstances, (i) offer, pledge, sell, contract to sell, sell any option or contract purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise transfer or dispose of or lend any shares of Mast common stock or securities convertible into, exercisable or exchangeable for or that represent the right to receive Mast common stock whether then owned or thereafter acquired (the Securities), (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Securities, (iii) make any demanded for or exercise any right with respect to the registration of any Mast common stock or any security convertible into or exercisable or exchangeable for Mast common stock or (iv) publicly disclose the intention to do any of the foregoing (each such restriction, the lock-up restrictions).

The lock-up restrictions automatically terminate with respect to one-third of the Securities on each of (i) the six-month anniversary of the date of the closing of the merger, (ii) the eight-month anniversary of the date of the closing of the merger and (iii) the ten-month anniversary of the date of the closing of the merger.

Management Following the Merger (see page [ ])

Effective as of the closing of the merger, Mast s executive officers are expected to be the current Savara management team:

Name	**Title**
Robert Neville	Chief Executive Officer
Taneli Jouhikainen	Chief Operating Officer
David Lowrance	Chief Financial Officer

Interests of Certain Directors, Officers and Affiliates of Mast and Savara (see pages [ ] and [ ])

When considering the recommendation of the Mast Board, you should be aware that Mast s executive officers and directors have interests in the merger that are different from, or in addition to, your interests as a stockholder. The Mast Board was aware of and considered these interests, among other matters, in evaluating and negotiating the merger agreement and the merger, and in recommending that the merger agreement be adopted by the stockholders of Mast. For example, Mast previously entered into severance agreements with its named executive officers that provide them with cash severance payments, cash payments intended to cover certain health insurance costs and the acceleration of their outstanding equity awards in the event their employment is terminated without cause following a change of control of Mast. In addition, certain of Mast s directors and executive officers have options and RSUs, which shall RSU s vest immediately prior to the consummation of the merger, and certain officers of Mast are eligible for a cash bonus award upon the consummation of the merger. Two members of the Mast Board are expected to continue as directors of Mast upon the closing of the merger and all of Mast s directors and executive officers are entitled to certain

indemnification and liability insurance coverage pursuant to the terms of the Merger Agreement and coverage pursuant to insurance policies maintained by Mast.

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As of February 2, 2017, the directors and executive officers of Mast, together with their affiliates, owned less than one percent of the outstanding shares of Mast common stock, and each of the Mast directors and executive officers has entered into a voting agreement in connection with the merger. The voting agreement is discussed in greater detail in the section entitled Agreements Related to the Merger Voting Agreements in this proxy statement/prospectus/information statement.

In considering the recommendation of the Savara Board with respect to approving the merger and related transactions by written consent, Savara stockholders should be aware that certain members of the board of directors and executive officers of Savara have interests in the merger that may be different from, or in addition to, interests they have as Savara stockholders. For example, certain of Savara s directors and executive officers have options or restricted stock, subject to vesting, which options to purchase shares of Savara common stock which will be converted into and become options to purchase shares of Mast common stock, Savara s directors and executive officers are expected to become directors and executive officers of Mast upon the closing of the merger and all of Savara s directors and executive officers are entitled to certain indemnification and liability insurance coverage pursuant to the terms of the Merger Agreement.

As of December 31, 2016, the directors and executive officers of Savara, together with their affiliates, owned approximately 8.65% of the outstanding shares of Savara capital stock, on an as converted to common stock basis. Savara officers and directors, and Serenova A/S, have also entered into a voting agreement in connection with the merger. The voting agreements are discussed in greater detail in the section entitled Agreements Related to the Merger Voting Agreements in this proxy statement/prospectus/information statement.

Considerations with Respect to U.S. Federal Income Tax Consequences of the Merger (see page [ ])

Each of Mast and Savara intends the merger to qualify as a reorganization within the meaning of Section 368(a) of the Code. Assuming the merger qualifies as a reorganization, in general, and subject to the qualifications and limitations set forth in the section entitled The Merger Considerations with Respect to U.S. Federal Income Tax Consequences of the Merger, the material U.S. federal income tax consequences to U.S. Holders (as defined herein) of Savara common stock should be as follows:

- a Savara stockholder should not recognize gain or loss upon the exchange of Savara common stock for Mast common stock pursuant to the merger, except to the extent of cash received in lieu of a fractional share of Mast common stock as described below;

- a Savara stockholder s aggregate tax basis for the shares of Mast common stock received in the merger (including any fractional share interest for which cash is received) should equal the stockholder s aggregate tax basis in the shares of Savara common stock surrendered upon completion of the merger;

- the holding period of the shares of Mast common stock received by a Savara stockholder in the merger should include the holding period of the shares of Savara common stock surrendered in exchange therefor provided the surrendered Savara common stock is held as a capital asset (generally, property held for investment) at the time of the merger; and

a Savara stockholder who receives cash in lieu of a fractional share of Mast common stock in the merger should recognize capital gain or loss in an amount equal to the difference between the amount of cash received instead of a fractional share and the stockholder s tax basis allocable to such fractional share.

Completion of the merger, however, is not conditioned upon a receipt of an opinion from counsel that the merger qualifies as a reorganization, and the merger will occur even if the merger does not qualify as a

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reorganization and Savara stockholders are fully taxed on the shares of Mast common stock they receive in the merger. Moreover, the tax opinions received by Savara and Mast are based on representation letters delivered by Savara and Mast as to factual matters and on certain factual assumptions, including with respect to the number of Savara shares held by, and the amount of consideration payable to, Savara stockholders, if any, that exercise dissenters rights. These representation letters will be delivered as of the effective date of this registration statement. If any of the representations or assumptions on which the tax opinions are based proves incorrect, including because there is a change in facts or law between the date of the representation letters and the closing date of the merger, the U.S. federal income tax consequences of the merger described above may be adversely affected.

Tax matters are very complicated, and the tax consequences of the merger to a particular Savara stockholder will depend on such stockholder s circumstances. Accordingly, you should consult your tax advisor for a full understanding of the tax consequences of the merger to you, including the applicability and effect of federal, state, local and non-U.S. income and other tax laws. For more information, please see the section entitled The Merger Considerations with Respect to U.S. Federal Income Tax Consequences of the Merger beginning on page [ ].

Risk Factors (see page [ ])

Both Mast and Savara are subject to various risks associated with their businesses and their industries. In addition, the merger, including the possibility that the merger may not be completed, poses a number of risks to each company and its respective stockholders, including the following risks:

- The exchange ratio is not adjustable based on the market price of Mast common stock so the merger consideration at the closing may have a greater or lesser value than at the time the Merger Agreement was signed;
- Failure to complete the merger may result in Mast and Savara paying a termination fee or expenses to the other and could harm the common stock price of Mast and the future business, liquidity and operations of each company;
- If the conditions to the merger are not met, the merger may not occur;
- The merger may be completed even though material adverse changes may result from the announcement of the merger, industry-wide changes and other causes;
- Some Mast and Savara executive officers and directors have interests in the merger that are different from yours and that may influence them to support or approve the merger without regard to your interests;
- The market price of the combined organization common stock may decline as a result of the merger;

Mast and Savara stockholders may not realize a benefit from the merger commensurate with the ownership dilution they will experience in connection with the merger;

During the pendency of the merger, Mast and Savara may not be able to enter into a business combination with another party at a favorable price (subject to certain exceptions) because of restrictions in the Merger Agreement, which could adversely affect their respective businesses;

Certain provisions of the Merger Agreement may discourage third parties from submitting alternative takeover proposals, including proposals that may be superior to the arrangements contemplated by the Merger Agreement; and

Because the lack of a public market for Savara shares makes it difficult to evaluate the fairness of the merger, the stockholders of Savara may receive consideration in the merger that is less than the fair market value of the Savara shares or Mast may pay more than the fair market value of the Savara shares.

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These risks and other risks are discussed in greater detail under the section entitled Risk Factors in this proxy statement/prospectus/information statement. Mast and Savara both encourage you to read and consider all of these risks carefully.

Regulatory Approvals (see page [ ])

In the United States, Mast must comply with applicable federal and state securities laws and the rules and regulations of the NYSE MKT in connection with the issuance of shares of Mast common stock and the filing of this proxy statement/prospectus/information statement with the SEC. As of the date hereof, the registration statement of which this proxy statement/prospectus/information statement is a part has not become effective.

NYSE MKT Listing (see page [ ])

Prior to consummation of the merger, Mast intends to file an initial listing application for the combined company with the NYSE MKT pursuant to NYSE MKT reverse merger rules. If such application is accepted, Mast anticipates that Mast s common stock will be listed on the NYSE MKT following the closing of the merger under the trading symbol SVRA.

Anticipated Accounting Treatment (see page [ ])

The merger will be treated by Mast as a reverse merger under the acquisition method of accounting in accordance with accounting principles generally accepted in the United States. For accounting purposes, Savara is considered to be acquiring Mast in the merger.

Appraisal Rights and Dissenters Rights (see page [ ])

Holders of Mast common stock are not entitled to appraisal rights in connection with the merger. Savara stockholders are entitled to appraisal rights in connection with the merger under Delaware law. For more information about such rights, see the provisions of Section 262 of the Delaware General Corporation Law, or the DGCL, attached hereto as *Annex C*, and the section entitled The Merger Appraisal Rights and Dissenters Rights in this proxy statement/prospectus/information statement.

Comparison of Stockholder Rights (see page [ ])

Both Mast and Savara are incorporated under the laws of the State of Delaware and, accordingly, the rights of the stockholders of each are currently, and will continue to be, governed by the DGCL. If the merger is completed, Savara stockholders will become stockholders of Mast, and their rights will be governed by the DGCL, the bylaws of Mast and, assuming Mast Proposals No. 2 and 3 are approved by Mast stockholders at the Mast special meeting, the amended and restated certificate of incorporation of Mast attached to this proxy statement/prospectus/information statement as *Annex D*. The rights of Mast stockholders contained in the amended and restated certificate of incorporation and bylaws of Mast differ from the rights of Savara stockholders under the amended and restated certificate of incorporation and bylaws of Savara, as more fully described under the section entitled Comparison of Rights of Holders of Mast Stock and Savara Stock in this proxy statement/prospectus/information statement.

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SELECTED HISTORICAL AND UNAUDITED PRO FORMA

CONDENSED COMBINED FINANCIAL INFORMATION AND DATA

The following tables present summary historical financial data for Mast and Savara, summary unaudited pro forma condensed combined financial data for Mast and Savara, and comparative historical and unaudited pro forma per share data for Mast and Savara.

Selected Historical Consolidated Financial Data of Mast

The selected consolidated statements of operations data for the years ended December 31, 2015 and 2014 and the selected consolidated balance sheet data as of December 31, 2015 and 2014 are derived from Mast s audited consolidated financial statements included elsewhere in this proxy statement/prospectus/information statement. The selected consolidated statements of operations data for the nine months ended September 30, 2016 and 2015 and the selected consolidated balance sheet data as of September 30, 2016 are derived from Mast s unaudited interim consolidated financial statements included elsewhere in this proxy statement/prospectus/information statement. Mast s unaudited interim consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles on the same basis as its audited annual consolidated financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal, recurring adjustments, necessary for the fair statement of those unaudited interim consolidated financial statements. Mast s historical results are not necessarily indicative of the results that may be expected in any future period and the results for the nine months ended September 30, 2016 are not necessarily indicative of results to be expected for the full year ending December 31, 2016 or any other period.

The selected historical consolidated financial data below should be read in conjunction with the section titled Mast Management s Discussion and Analysis of Financial Condition and Results of Operations, Risk Factors Risks Related to Mast and Mast s consolidated financial statements and related notes included elsewhere in this proxy statement/prospectus/information statement.

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Condensed Consolidated Statements of Operations and Comprehensive Loss

(in thousands, except for share and per share data)

	Years Ended December 31,			Nine Months Ended September 30,	
	2015	2014	2013	2016	2015
				(unaudited)	
Revenue	$	$	$	$ 45	$
Operating expenses:					
Research and development	28,264	19,435	12,902	20,715	21,106
Selling, general and administrative	10,963	9,488	8,518	7,408	8,448
Transaction related expense		271	79		
Depreciation and amortization	146	85	40	86	105
Total operating expenses	39,373	29,279	21,539	28,209	29,659
Loss from operations	(39,373)	(29,279)	(21,539)	(28,164)	(29,659)
Interest income	130	69	60	107	94
Interest expense	(603)			(1,979)	(102)
Other income (loss), net	4	508	(1)	(29)	(12)
Net loss	$ (39,842)	$ (28,702)	$ (21,480)	$ (30,065)	$ (29,679)
Net loss per share basic and diluted	$ (0.25)	$ (0.23)	$ (0.28)	$ (0.15)	$ (0.18)
Weighted average shares outstanding basic and diluted	162,219,116	122,409,183	76,585,752	196,527,686	161,748,944
Comprehensive Income/(Loss):					
Net loss	$ (39,842)	$ (28,702)	$ (21,480)	$ (30,065)	$ (29,679)
Other comprehensive income/(loss)	8	(4)	(19)	22	34
Comprehensive net loss	$ (39,834)	(28,706)	$ (21,499)	$ (30,043)	$ (29,645)

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Condensed Consolidated Balance Sheets

(in thousands, except for share and par value data)

	September 30, 2016 (Unaudited)	December 31, 2015	December 31, 2014
Assets			
Current assets:			
Cash and cash equivalents	$ 20,521	$ 23,052	$ 35,808
Investment securities	6,429	17,929	21,481
Prepaid expenses and other current assets	1,333	1,271	1,114
Total current assets	28,283	42,252	58,403
Property and equipment, net	148	226	188
In-process research and development	8,549	8,549	8,549
Goodwill	3,007	3,007	3,007
Other assets	131	183	353
Total assets	$ 40,118	$ 54,217	$ 70,500
Liabilities and Stockholders Equity			
Current liabilities:			
Accounts payable	$ 1,497	$ 2,600	$ 1,370
Accrued liabilities	6,902	8,152	5,625
Accrued compensation and payroll taxes	901	1,430	1,443
Debt facility	11,593	10,991	
Total current liabilities	20,893	23,173	8,438
Long-term lease obligation	19	25	
Debt facility, net of current portion	2,615	3,726	
Deferred income tax liability	3,404	3,404	3,404
Total liabilities	26,931	30,328	11,842
Stockholders equity:			
Common stock, $0.001 par value; 500,000,000 shares authorized; 232,892,110 and 163,614,297 shares issued and outstanding at September 30, 2016 and December 31, 2015, respectively	233	164	159
Additional paid-in capital	317,988	298,715	293,655
Accumulated other comprehensive income/(loss)	4	(17)	(25)
Accumulated deficit	(305,038)	(274,973)	(235,131)
Total stockholders equity	13,187	23,889	58,658

Total liabilities and stockholders equity	$ 40,118	$ 54,217	$ 70,500

Selected Historical Consolidated Financial Data of Savara

The selected consolidated statements of operations data for the years ended December 31, 2015 and 2014 and the selected consolidated balance sheet data as of December 31, 2015 and 2014 are derived from Savara s audited consolidated financial statements included elsewhere in this proxy statement/prospectus/information statement. The selected consolidated statements of operations data for the nine months ended September 30, 2016 and 2015 and the selected consolidated balance sheet data as of September 30, 2016 are derived from Savara s unaudited interim condensed consolidated financial statements included elsewhere in this proxy

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statement/prospectus/information statement. Savara s unaudited interim condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles on the same basis as its audited annual consolidated financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal, recurring adjustments, necessary for the fair statement of those unaudited interim condensed consolidated financial statements. Savara s historical results are not necessarily indicative of the results that may be expected in any future period and the results for the nine months ended September 30, 2016 are not necessarily indicative of results to be expected for the full year ending December 31, 2016 or any other period.

The selected historical consolidated financial data below should be read in conjunction with the section titled Savara Management s Discussion and Analysis of Financial Condition and Results of Operations, Risk Factors Risks Related to Savara s Capital Requirements and Financial Condition and Savara s consolidated financial statements and related notes included elsewhere in this proxy statement/prospectus/information statement.

Consolidated Statements of Operations Data:

	Year Ended December 31,		Unaudited Nine Months Ended September 30,	
	2015	2014	2016	2015
	(in thousands)			
Grant Revenue	$ 54	$ 1,548	$	$ 54
Operating expenses:				
Research and development	$ 4,321	$ 5,429	$ 4,694	$ 2,818
General and administrative	1,656	1,568	2,211	1,173
Total operating expenses	5,977	6,997	6,905	3,991
Loss from operations	(5,923)	(5,449)	(6,905)	(3,937)
Other expense	3,076	833	50	2,312
Net loss	$ (8,999)	$ (6,282)	$ (6,955)	$ (6,249)
Net loss per common share, basic and diluted	$ (5.55)	$ (4.26)	$ (2.58)	$ (3.92)
Shares used in computing net loss per common share, basic and diluted	1,653,259	1,503,058	2,723,760	1,633,104

Consolidated Balance Sheet Data:

	As of December 31,		As of September 30, 2016 (unaudited)
	2015	2014	

		(in thousands)	
Cash	$ 16,683	$ 12,688	$ 15,512
Working capital	15,680	12,956	14,587
Total assets	17,854	13,937	32,258
Convertible promissory notes		7,870	3,200
Accumulated deficit	(27,483)	(18,484)	(34,439)
Total stockholders equity/(deficit)	(27,328)	(18,299)	(31,311)

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Selected Unaudited Pro Forma Condensed Combined Financial Data of Mast and Savara

The following information does not give effect to the proposed reverse stock split of Mast common stock described in Mast Proposal No. 2.

The following selected unaudited pro forma condensed combined financial information has been prepared to reflect the acquisitions of Mast and Serendex by Savara using the acquisition method of accounting. On January 6, 2017, Savara and Mast entered into an Agreement and Plan of Merger and Reorganization pursuant to which a wholly owned subsidiary of Mast will merge with and into Savara, with Savara becoming a wholly owned subsidiary of Mast and the surviving corporation of the merger. For accounting purposes, Savara is considered to be acquiring Mast in the merger. In addition, on July 15, 2016, Savara completed its acquisition of Serendex.

The unaudited pro forma condensed combined financial statements were prepared in accordance with the regulations of the Securities and Exchange Commission (SEC). The unaudited pro forma condensed combined balance sheet as of September 30, 2016 is presented as if the merger had been completed on September 30, 2016. The unaudited pro forma condensed combined statements of operations for the nine months ended September 30, 2016 and for the year ended December 31, 2015 assumes that both the merger and Savara s acquisition of Serendex took place as of January 1, 2015, and combines the historical results of Mast and Savara and the pre-acquisition historical results of Serendex.

The selected unaudited pro forma condensed combined financial data are presented for illustrative purposes only and are not necessarily indicative of the combined financial position or results of operations of future periods or the results that actually would have been realized had the entities been a single entity during these periods. The selected unaudited pro forma condensed combined financial data as of and for the nine months ended September 30, 2016 and for the year ended December 31, 2015 are derived from the unaudited pro forma condensed combined financial information and should be read in conjunction with that information. For more information, please see the section titled Unaudited Pro Forma Condensed Combined Financial Statements in this proxy statement/prospectus/information statement.

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The unaudited pro forma condensed combined financial statements assume that, at the effective time of the merger, each share of Savara common stock will convert into the right to receive approximately 40 shares of Mast common stock, subject to adjustment to account for the effect of the proposed reverse stock split of Mast common stock to be implemented prior to the consummation of the merger. The estimated exchange ratio calculation used herein is based upon Mast s capitalization numbers immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted to account for the issuance of any additional shares of Mast common stock prior to the consummation of the merger.

	Year Ended December 31, 2015	Nine Months Ended September 30, 2016
	(in thousands except per share amounts)	
Unaudited Pro Forma Combined Statement of Operations Data:		
Grant revenue	$ 54	$ 45
Operating expenses:		
Research and development	39,115	29,511
General and administrative	15,513	12,028
Depreciation and amortization	152	342
Total operating expenses	54,780	41,881
Loss from operations	(54,726)	(41,836)
Interest and other income (expense), net	(3,519)	(2,009)
Net loss	$ (58,245)	$ (43,845)
Accretion of redeemable convertible preferred stock	(183)	(70)
Net loss attributable to common stockholders	(58,428)	(43,915)
Basic and diluted net loss per share	$ (0.09)	$ (0.05)

	As of September 30, 2016 (in thousands)
Unaudited Pro Forma Combined Balance Sheet Data:	
Cash and cash equivalents	$ 36,033
Working capital	16,027
Total assets	100,914
Total stockholders equity	47,426

Comparative Historical and Unaudited Pro Forma Per Share Data

The information below reflects the historical net loss and book value per share of Mast common stock and the historical net loss and book value per share of Savara common stock in comparison with the unaudited pro forma net loss and book value per share after giving effect to the proposed merger of Mast with Savara on a pro forma basis. The unaudited pro forma net loss and book value per share does not give effect to the proposed reverse stock split of Mast common stock described in Mast Proposal No. 2.

You should read the tables below in conjunction with the audited and unaudited financial statements of Mast included in this proxy statement/prospectus/information statement and the audited and unaudited financial statements of Savara included in this proxy statement/prospectus/information statement and the related notes and the unaudited pro forma condensed combined financial information and notes related to such financial statements included elsewhere in this proxy statement/prospectus/information statement.

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MAST

	Nine Months Ended September 30, 2016	Year Ended December 31, 2015
Historical Per Common Share Data:		
Basic and diluted net loss per share	$ (0.15)	$ (0.25)
Tangible book value per share	0.01	0.08

SAVARA

	Nine Months Ended September 30, 2016	Year Ended December 31, 2015
Historical Per Common Share Data:		
Basic and diluted net loss per share	$ (2.58)	$ (5.55)
Tangible book value per share	(0.70)	9.47

MAST AND SAVARA

	Nine Months Ended September 30, 2016	Year Ended December 31, 2015
Combined Company Pro Forma Data:		
Basic and diluted net loss per share	$ (0.05)	$ (0.09)
Tangible book value per share	(0.01)	N/A

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MARKET PRICE AND DIVIDEND INFORMATION

Market Information

Mast s common stock trades under the symbol MSTX on the NYSE MKT equities market. The following table sets forth the high and low sale prices for Mast common stock in each full quarterly period within the three most recent fiscal years.

	Sales Price	
	High	**Low**
Year Ended December 31, 2014		
First Quarter	$ 1.10	$ 0.45
Second Quarter	0.73	0.52
Third Quarter	0.69	0.53
Fourth Quarter	0.60	0.40
Year Ended December 31, 2015		
First Quarter	$ 0.63	$ 0.42
Second Quarter	0.58	0.46
Third Quarter	0.60	0.38
Fourth Quarter	0.59	0.37
Year Ended December 31, 2016		
First Quarter	$ 0.50	$ 0.21
Second Quarter	0.48	0.27
Third Quarter	0.71	0.09
Fourth Quarter	0.16	0.07
Year Ended December 31, 2017		
First Quarter (through February 9, 2017)	$ 0.23	$ 0.09

On February 9, 2017, the last reported sale price of Mast s common stock on the NYSE MKT was $0.14 per share. As of February 2, 2017, Mast had approximately 116 record holders of its common stock. The number of beneficial owners is substantially greater than the number of record holders because a large majority of Mast s outstanding common stock is held of record through brokerage firms in street name.

Dividend Policy

Mast has never declared or paid any cash dividends on its common stock and does not anticipate declaring or paying any cash dividends on its common stock in the foreseeable future. Mast expects to retain all available funds and any future earnings to support operations and fund the development and growth of its business.

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RISK FACTORS

The combined organization will be faced with a market environment that cannot be predicted and that involves significant risks, many of which will be beyond its control. In addition to the other information contained in this proxy statement/prospectus/information statement, you should carefully consider the material risks described below before deciding how to vote your shares of stock. In addition, you should read and consider the risks associated with the business of Mast because these risks may also affect the combined company these risks can be found in Mast s Annual Report on Form 10-K, as updated by subsequent Quarterly Reports on Form 10-Q, all of which are filed with the SEC. You should also read and consider the other information in this proxy statement/prospectus/information statement and the other documents incorporated by reference into this proxy statement/prospectus/information statement. Please see the section entitled Where You Can Find More Information in this proxy statement/prospectus/information statement.

Risks Related to the Merger

The exchange ratio is not adjustable based on the market price of Mast common stock so the merger consideration at the closing may have a greater or lesser value than at the time the Merger Agreement was signed.

The Merger Agreement has set the exchange ratio for the Savara common stock, and the exchange ratio is only adjustable upward or downward under certain circumstances as described in The Merger Merger Consideration and Adjustment. Any changes in the market price of Mast common stock before the completion of the merger will not affect the number of shares Savara securityholders will be entitled to receive pursuant to the Merger Agreement. Therefore, if before the completion of the merger the market price of Mast common stock declines from the market price on the date of the Merger Agreement, then Savara securityholders could receive merger consideration with substantially lower value. Similarly, if before the completion of the merger the market price of Mast common stock increases from the market price on the date of the Merger Agreement, then Savara securityholders could receive merger consideration with substantially more value for their shares of Savara capital stock than the parties had negotiated for in the establishment of the exchange ratio. Because the exchange ratio does not adjust as a result of changes in the value of Mast common stock, for each one percentage point that the market value of Mast common stock rises or declines, there is a corresponding one percentage point rise or decline, respectively, in the value of the total merger consideration issued to Savara securityholders.

Failure to complete the merger may result in Mast and Savara paying a termination fee or expenses to the other party and could harm the common stock price of Mast and future business and operations of each company.

If the merger is not completed, Mast and Savara are subject to the following risks:

- if the Merger Agreement is terminated under certain circumstances, Mast will be required to pay Savara a termination fee of $1.8 million;

- if the Merger Agreement is terminated under certain circumstances, Savara will be required to pay Mast a termination fee of $2.5 million;

the price of Mast stock may decline and remain volatile, which may result in Mast being delisted from the NYSE MKT; and

costs related to the merger, such as legal and accounting fees, and with respect to Mast, tail insurance premiums, which Mast and Savara estimate will total approximately $2.6 million and $1.5 million, respectively, some of which must be paid even if the merger is not completed.

In addition, if the Merger Agreement is terminated and the Mast Board or Savara Board determines to seek another business combination, there can be no assurance that either Mast or Savara will be able to find a partner willing to provide equivalent or more attractive consideration than the consideration to be provided by each party in the merger.

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If the conditions to the merger are not met, the merger may not occur.

Even if the merger is approved by the stockholders of Mast and Savara, specified conditions must be satisfied or waived to complete the merger. These conditions are set forth in the Merger Agreement and described in the section entitled The Merger Agreement Conditions to the Completion of the Merger in this proxy statement/prospectus/information statement. Mast and Savara cannot assure you that all of the conditions will be satisfied or waived. If the conditions are not satisfied or waived, the merger may not occur or will be delayed, and Mast and Savara each may lose some or all of the intended benefits of the merger.

The merger may be completed even though material adverse changes may result from the announcement of the merger, industry-wide changes and other causes.

In general, either Mast or Savara can refuse to complete the merger if there is a material adverse change affecting the other party between the date of the Merger Agreement, and the closing. However, certain types of changes do not permit either party to refuse to complete the merger, even if such change could be said to have a material adverse effect on Mast or Savara, including:

- any effect, change, event, circumstance or development in the conditions generally affecting the industries in which Savara and Mast operate or the United States or global economy or capital markets as a whole;
- any natural disaster or any acts of terrorism, sabotage, military action or war or any escalation of worsening thereof;
- any failure by Mast or Savara to meet internal projections or forecasts or third party revenue or earnings predictions for any period ending on or after January 6, 2017;
- any changes in GAAP or applicable legal requirements after January 6, 2017; or
- with respect to Mast, any change in the price or trading volume of Mast Common Stock.

If adverse changes occur and Mast and Savara still complete the merger, the combined organization stock price may suffer. This in turn may reduce the value of the merger to the stockholders of Mast, Savara or both.

Some Mast and Savara executive officers and directors have interests in the merger that are different from yours and that may influence them to support or approve the merger without regard to your interests.

Certain officers and directors of Mast and Savara participate in arrangements that provide them with interests in the merger that are different from yours, including, among others, the continued service as an officer or director of the combined organization, severance benefits, cash and equity bonuses contingent upon the closing of the merger, continued indemnification and the potential ability to sell an increased number of shares of common stock of the combined organization in accordance with Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. For example, Mast previously entered into severance agreements with its named executive officers that provide them with cash severance payments, cash payments intended to cover certain health insurance costs and the

acceleration of their outstanding equity awards in the event their employment is terminated without cause following a change of control of Mast. In addition, certain of Mast s directors and executive officers have options and RSUs, which RSUs shall vest immediately prior to the date the merger is consummated, and certain officers of Mast are eligible for a cash bonus award upon the closing of the merger. Two members of the Mast Board are expected to continue as directors of Mast upon the closing of the merger, and all of Mast s directors and executive officers are entitled to certain indemnification and liability insurance coverage pursuant to the terms of the Merger Agreement and coverage pursuant to insurance policies maintained by Mast.

Based on the terms of their respective severance agreements, outstanding equity awards and Mast s January 2017 incentive awards, Mast s named executive officers will be entitled to receive a total value of approximately $2.5 million (collectively, not individually) in connection with the consummation of the merger and the associated termination of their employment from Mast, based on data available as of February 2, 2017.

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The market price of Mast common stock following the merger may decline as a result of the merger.

The market price of Mast common stock may decline as a result of the merger for a number of reasons including if:

- investors react negatively to the prospects of the combined organization s business and prospects from the merger;
- the effect of the merger on the combined organization s business and prospects is not consistent with the expectations of financial or industry analysts; or
- the combined organization does not achieve the perceived benefits of the merger as rapidly or to the extent anticipated by financial or industry analysts.

Mast and Savara stockholders may not realize a benefit from the merger commensurate with the ownership dilution they will experience in connection with the merger.

If the combined organization is unable to realize the full strategic and financial benefits currently anticipated from the merger, Mast and Savara stockholders will have experienced substantial dilution of their ownership interests in their respective companies without receiving any commensurate benefit, or only receiving part of the commensurate benefit to the extent the combined organization is able to realize only part of the strategic and financial benefits currently anticipated from the merger.

During the pendency of the merger, Mast and Savara may not be able to enter into a business combination with another party at a favorable price because of restrictions in the Merger Agreement, which could adversely affect their respective businesses.

Covenants in the Merger Agreement impede the ability of Mast and Savara to make acquisitions, subject to certain exceptions relating to fiduciaries duties, as set forth below, or complete other transactions that are not in the ordinary course of business pending completion of the merger. As a result, if the merger is not completed, the parties may be at a disadvantage to their competitors during that period. In addition, while the Merger Agreement is in effect, each party is generally prohibited from soliciting, initiating, encouraging or entering into certain extraordinary transactions, such as a merger, sale of assets or other business combination outside the ordinary course of business, with any third party, subject to certain exceptions described below. These restrictions apply even if such transactions could be favorable to such party s stockholders.

Certain provisions of the Merger Agreement may discourage third parties from submitting alternative takeover proposals, including proposals that may be superior to the arrangements contemplated by the Merger Agreement.

The terms of the Merger Agreement prohibit each of Mast and Savara from soliciting alternative takeover proposals or cooperating with persons making unsolicited takeover proposals, except in limited circumstances when such party s board of directors determines in good faith that an unsolicited alternative takeover proposal is or is reasonably likely to lead to a superior takeover proposal and is reasonably capable of being consummated and that failure to cooperate with the proponent of the proposal is reasonably likely to result in a breach of the board s fiduciary duties. In addition, if Mast or Savara terminate the Merger Agreement under certain circumstances, including terminating because of a decision of a board of directors to recommend a superior proposal, Mast would be required to pay a termination fee of

$1.8 million to Savara or Savara would be required to pay a termination fee of $2.5 million to Mast, respectively. This termination fee may discourage third parties from submitting alternative takeover proposals to Mast or Savara or their stockholders, and may cause the respective boards of directors to be less inclined to recommend an alternative proposal.

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Because the lack of a public market for Savara shares makes it difficult to evaluate the fairness of the merger, the stockholders of Savara may receive consideration in the merger that is less than the fair market value of the Savara shares and/or Mast may pay more than the fair market value of the Savara shares.

The outstanding capital stock of Savara is privately held and is not traded in any public market. The lack of a public market makes it extremely difficult to determine the fair market value of Savara. Because the percentage of Mast equity to be issued to Savara stockholders was determined based on negotiations between the parties, it is possible that the value of the Mast common stock to be received by Savara stockholders will be less than the fair market value of Savara, or Mast may pay more than the aggregate fair market value for Savara.

If the merger does not qualify as a tax-free reorganization, the receipt of Mast common stock pursuant to the merger could be fully taxable to all Savara stockholders.

Each of Mast and Savara intends the merger to qualify as a reorganization within the meaning of Section 368(a) of the Code. However, completion of the merger is not conditioned upon receipt of an opinion from counsel dated as of the closing date that the merger qualifies as a reorganization. The tax opinions received by Savara and Mast as of the effective date of this proxy statement/prospectus/information statement are based on representation letters delivered as of such date by Savara and Mast pertaining to factual matters and on certain factual assumptions, including with respect to the number of Savara shares held by, and the amount of consideration payable to, Savara stockholders, if any, that exercise dissenters rights. If any of these assumptions or representations proves incorrect, for example, if there is a change in applicable law or if consideration paid to Savara stockholders exercising dissenters rights is significant, the merger could be fully taxable to all Savara stockholders. See the section entitled The Merger Considerations with Respect to U.S. Federal Income Tax Consequences of the Merger beginning on page [ ].

The exchange ratio is subject to an upward adjustment to the extent that Mast s net cash at the effective time of the merger is less than zero dollars and as a result, Mast securityholders could own less of the combined company.

The exchange ratio is subject to an upward adjustment to the extent that Mast s net cash at the effective time of the merger is less than zero dollars ($0.00) and, as a result, Mast securityholders could own less, and Savara securityholders could own more, of the combined company. Certain of Mast s outstanding warrants provide that, in the event of certain fundamental transactions, whereby a person or group of persons acquires more than 50% of Mast s common stock, then, holders of such outstanding warrants may elect and require Mast to purchase the warrants held by such holder by making a cash payment in an amount equal to the Black-Scholes Value of the remaining unexercised portion of such holder s warrants. Mast does not believe that any cash payment is required pursuant to the terms of the warrants as a result of the Merger; provided, however, that if Mast shall be required pursuant to the terms of the warrants to make any cash payments or otherwise settle the warrants prior to closing, the exchange ratio could be adjusted to adversely impact the ownership of Mast stockholders of the combined company.

Risks Related to Mast

Risks Related to Mast s Capital Requirements, Finances and Operations

Mast is a clinical-stage company with no drug products approved for commercial sale, Mast has incurred net losses since Mast s inception, Mast expects to incur substantial losses and negative operating cash flow for the foreseeable future, and Mast needs additional funding to continue to conduct its operations and advance development of its product candidates.

Mast is a clinical-stage biopharmaceutical company and has not generated sustainable revenue from operations or been profitable since inception, and it may never achieve profitability. Mast has devoted its resources to acquiring and developing proprietary product candidates, but such product candidates cannot be

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marketed until clinical development is completed and governmental approvals have been obtained. None of its product candidates has been approved for sale by any regulatory agency or is available for commercial sale and each will require significant additional capital to advance their development toward regulatory approval for commercial sale.

For the year ended December 31, 2015 and the nine months ended September 30, 2016, Mast incurred losses from operations of $39.4 million and $28.2 million, respectively, and its net cash used in operating activities was $32.9 million and $29.9 million, respectively. At September 30, 2016, Mast had an accumulated deficit of $305.0 million, its cash, cash equivalents and investment securities were $27.0 million, and its working capital was $7.4 million. Mast expects to continue to incur substantial operating losses for the next several years as Mast advances its product candidates, which are in intermediary to early stages of development, through clinical studies and other development activities necessary to seek approval from the FDA and regulatory authorities outside of the U.S. to commercialize them. Accordingly, there is no current source of revenue from operations, much less profits, to sustain Mast s present activities. Further, no revenue from operations will likely be available until, and unless, one of Mast s product candidates is approved by the FDA or another regulatory agency and successfully marketed, or Mast enters into an arrangement that provides for licensing revenue or other partnering-related funding, outcomes which Mast may not achieve.

Mast estimates that its existing capital resources are sufficient to fund its current and planned operations into the second quarter of 2017. Mast implemented significant cost-saving measures during the fourth quarter of 2016 after the Phase 3 study of vepoloxamer did not meet its primary efficacy endpoint, including the wind-down of all vepoloxamer clinical development activities and an approximately 70% reduction in its workforce, and plans to continue to closely manage its operating expenses. However, Mast will need additional capital in the second quarter of 2017 to continue operations and execute on its current business strategy.

Mast cannot predict the extent of its future operating losses and accumulated deficit, and Mast may never generate sufficient revenues to achieve or sustain profitability. To become and remain profitable, Mast must succeed in developing and obtaining required regulatory approvals and commercializing its product candidates. This will require Mast to succeed in a range of challenging activities, and many aspects of drug development are inherently unpredictable. Mast may never succeed in obtaining the FDA s or another regulatory authority s approval to market its product candidates or otherwise generate revenues sufficient to achieve profitability.

There is substantial doubt as to Mast s ability to continue as a going concern.

At September 30, 2016, Mast s cash, cash equivalents and investment securities were $27.0 million and its working capital was $7.4 million. Mast continues to incur significant operating losses, it does not believe its capital resources as of September 30, 2016 will be sufficient to fund its planned operations for the next 12 months, and it may not be able to raise additional capital as and when needed. These uncertainties raise substantial doubt regarding Mast s ability to continue as a going concern.

As more fully discussed in Note 1 to the condensed consolidated financial statements included in this proxy statement/prospectus/information statement and Mast s Management s Discussion and Analysis of Financial Condition and Results of Operations of this report, if it is unable to complete the merger, Mast plans to raise additional capital through its ATM program and other equity or debt financings and continue to explore opportunities to strategically monetize its product candidates through collaborations, including licensing arrangements. Mast has historically been able to raise capital through equity offerings; however, there is no assurance that Mast will be successful in that regard in the future or that it will be able to obtain sufficient, or any, additional capital on acceptable terms, or at all. Further, Mast has based its estimated capital needs on assumptions that may prove to be wrong and cannot assure you that

estimates and assumptions will not change. For example, Mast is currently assuming that the investigator-sponsored clinical studies of AIR001 it is supporting will be completed without its commitment of resources beyond what Mast s current agreements require. If Mast s estimated funding needs change and/or sufficient capital is not available, Mast may be required

to further reduce the scope of, delay, or eliminate its ongoing and planned product development activities, any of which could have a material adverse effect on Mast s business and may impair its intangible assets.

Due to the uncertainty of Mast s ability to raise additional capital required to continue to fund its future operations, if it is unable to complete the merger, the Mast Board will consider available strategic alternatives beyond financings, including other possible mergers and business combinations, a sale of part or all of Mast s assets, collaboration and licensing arrangements. There is no assurance that Mast would be able to successfully negotiate and consummate a transaction on a timely basis or at all. Any transaction Mast consummates may offer limited value for its existing product candidates and proprietary technology and may not enhance stockholder value or provide expected benefits. If Mast is unable to successfully complete a strategic transaction or otherwise secure additional capital on a timely basis and on terms that are acceptable, Mast may be required to further reduce the scope of or cease its operations altogether.

The condensed consolidated financial statements of Mast included in this proxy statement/prospectus/information statement have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The financial statements of Mast do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts of liabilities that may result from uncertainty related to Mast s ability to continue as a going concern.

Mast s product candidates are at intermediary to early stages of development, the success of Mast s business currently is dependent largely on its ability to advance development of AIR001 for the treatment of HFpEF, and if clinical studies of AIR001 are not successful, Mast s business, financial condition and results of operations may be materially adversely affected and the price of Mast s common stock may decline.

None of Mast s product candidates have been approved for sale by any regulatory agency or is available for commercial sale. Mast is focusing its resources primarily on the development of AIR001. Accordingly, the success of Mast s business currently is highly dependent on its ability, or that of a future partner, to successfully develop, obtain regulatory approval for and then successfully commercialize AIR001 and Mast s efforts, or those of a future partner, in this regard may prove unsuccessful. Ongoing clinical studies of AIR001 may not demonstrate the safety and efficacy necessary to support continued clinical development. In addition, continued development of AIR001 will require significant additional research, formulation and manufacture development, and extensive clinical testing prior seeking regulatory approval for commercial sale and will take several years. The drug development and regulatory approval process is subject to many risks, including the risks discussed in other risk factors below, and AIR001 may never receive marketing approval from the FDA or any regulatory agency. If the results or timing of Mast s clinical or nonclinical studies, regulatory filings, the regulatory process, regulatory developments, and other activities, actions or decisions related to AIR001 do not meet Mast s expectations or those of securities market participants, the market price of Mast s common stock could decline significantly. If any of Mast s product candidates is approved by the FDA or any foreign regulatory agency, Mast s ability to generate revenue will depend in substantial part on the extent to which that drug product is accepted by the medical community and reimbursed by third-party payers, as well as Mast s ability to market and sell the product and ensure that Mast s third-party manufacturers produce it in quantities sufficient to meet commercial demand, if any.

The terms of Mast s debt facility place restrictions on its operating and financial flexibility, and failure to comply with covenants or to satisfy certain conditions of the agreement governing the debt facility may result in acceleration of Mast s repayment obligations and foreclosure on its pledged assets, which could significantly harm Mast s liquidity, financial condition, operating results, business and prospects and cause the price of Mast s common stock to decline.

As of February 2, 2017, Mast had an outstanding principal balance of $3.1 million under its debt facility with Hercules Capital, Inc. and Hercules Technology III, L.P. (collectively referred to as Hercules) that is

secured by a lien covering substantially all of Mast s assets, excluding intellectual property, but including proceeds from the sale, licensing or disposition of Mast s intellectual property. The loan and security agreement governing the debt facility requires Mast to comply with a number of covenants (affirmative and negative), including restrictive covenants that limit Mast s ability to: incur additional indebtedness; encumber the collateral securing the loan; acquire, own or make investments; repurchase or redeem any class of stock or other equity interest; declare or pay any cash dividend or make a cash distribution on any class of stock or other equity interest; transfer a material portion of Mast s assets; acquire other businesses; and merge or consolidate with or into any other organization or otherwise suffer a change in control, in each case subject to exceptions. Mast s intellectual property also is subject to customary negative covenants. In addition, subject to limited exceptions, Hercules could declare an event of default upon the occurrence of any event that it interprets as having a material adverse effect upon Mast s business, operations, properties, assets, or financial condition or upon Mast s ability to perform or pay the secured obligations under the loan and security agreement or upon the collateral or Hercules liens on the collateral under the agreement, thereby requiring Mast to repay the loan immediately, together with a prepayment charge of up to 2% of the then outstanding principal balance and end-of-term charge of $712,500, or renegotiate the terms of the agreement. Although, in and of itself, the occurrence of adverse results or delays in any clinical study or the denial, delay or limitation of approval of or taking of any other regulatory action by the FDA or another governmental entity will not constitute a material adverse effect under Mast s loan and security agreement with Hercules, Hercules may determine that such an event together with contemporaneous events or circumstances constitutes a material adverse effect upon Mast s business, operations, properties, assets, or financial condition or upon Mast s ability to perform or pay the secured obligations under the loan and security agreement. If Mast defaults under the facility, Hercules may accelerate all of Mast s repayment obligations and, if Mast is unable to access funds to meet those obligations or to renegotiate Mast s agreement, Hercules could take control of Mast s pledged assets and Mast could immediately cease operations. If Mast were to renegotiate its agreement under such circumstances, the terms may be significantly less favorable to Mast. If Mast were liquidated, Hercules right to repayment would be senior to the rights of Mast s stockholders to receive any proceeds from the liquidation. Any declaration by Hercules of an event of default could significantly harm Mast s liquidity, financial condition, operating results, business, and prospects and cause the price of Mast s common stock to decline.

Under the loan and security agreement with Hercules, the merger would result in a change in control of Mast, triggering immediate repayment of the outstanding amount of all principal, accrued interest, accrued, unpaid fees and expenses, together with a prepayment charge of 2% of the principal balance and an end of term charge of $712,500 (referred to as the Change in Control Prepayment Provisions). Mast plans to enter into an amendment to its agreement with Hercules to become effective contingent upon consummation of the merger whereby the merger would not trigger the Change in Control Repayment Provisions and the loan would remain in place upon its existing terms, including the January 1, 2019 scheduled maturity date. However, Mast and Hercules contemplate that the amendment will require the combined company to maintain (a) at least $4 million of cash unless and until Mast, Savara or the combined company raised $6 million in net cash proceeds from equity and/or subordinated debt financings on or before April 30, 2017 and (b) at least $2 million of cash unless and until Mast, Savara or the combined company raised $20 million in net cash proceeds from equity and/or subordinated debt financings and/or certain research grant awards on or before August 31, 2017. Such an amendment to Mast s agreement with Hercules is a condition to Savara s obligation to consummate the merger. If Mast and Hercules do not enter into the contemplated amendment, Savara could elect not to complete the merger and Mast s financial condition, operating results, business and prospects could be significantly harmed. If Mast and Hercules enter into the contemplated amendment, the minimum cash requirement could restrict the combined company s ability to execute on its business strategy, which could adversely impact its financial condition, operating results, business and prospects.

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Mast will need to obtain additional funding to pursue its current business strategy and continue as a going concern and Mast may not be able to obtain such funding on a timely basis, or on commercially reasonable terms, or at all. Any capital-raising transaction Mast is able to complete may result in substantial dilution to its existing stockholders, require Mast to relinquish significant rights, or restrict its operations.

As discussed above, based on its projected operating expenses and capital needs, Mast s cash, cash equivalents and investment securities as of September 30, 2016, Mast believes that its capital resources will be sufficient to fund its operations into the second quarter of 2017, but it will need additional capital to continue operations and execute on its current business strategy. In addition, Mast may utilize its current financial resources sooner than it currently expects if it incurs unanticipated expenses or the estimates and assumptions on which Mast has based its estimated capital needs prove to be wrong.

Although Mast was able to raise significant funds in the past through equity financings and a debt financing, the conditions of and Mast s access to capital markets are highly variable and adequate additional equity or debt financing may not be available to Mast in the future on acceptable terms, or on a timely basis, or at all. Further, each of these financing alternatives carries risks. Raising capital through the issuance of Mast s common stock, or securities convertible into or exercisable for Mast s common stock, may depress the market price of Mast s common stock and may substantially dilute Mast s existing stockholders. In addition, even if Mast were able to raise capital through the sale and issuance of its common stock, Mast may not have enough authorized common stock available to raise additional capital that would be sufficient to fund planned operations for the next 12 months. As of February 2, 2017, approximately 115 million of Mast s authorized shares of common stock were not outstanding or reserved for issuance under outstanding warrants and equity awards, equity incentive plans or other rights. Assuming a sale price of $0.13 per share, which was the closing price of Mast s common stock on February 2, 2017, gross proceeds from the sale of all 115 million available shares would be approximately $15 million, but any financing transaction available to Mast in the near-term likely would involve a sale price at a discount to market and/or significant warrant coverage. Assuming 100% warrant coverage and a sale price of $0.13 per unit, gross proceeds from the sale of all 115 million available shares would be approximately $7.5 million. If instead Mast seeks to raise capital through strategic transactions, such as licensing arrangements or sales of one or more of Mast s technologies or product candidates, Mast may be required to relinquish valuable rights and dilute the current and future value of Mast s assets. For example, any licensing arrangement likely would require Mast to share with its licensee a significant portion of any revenues generated by Mast s licensed technologies. Additionally, Mast s control over the development and/or marketing of any products or product candidates licensed or sold to third parties likely would be reduced and thus Mast may not realize the full value of any such products or product candidates. Debt financings would likely involve covenants and/or repayment provisions that would restrict Mast s operations. These restrictive covenants may include limitations on additional borrowing and specific restrictions on the use of Mast s assets, including requirements to maintain specified amounts of cash or restrictions on Mast s ability to license or sell Mast s intellectual property assets, as well as prohibitions on Mast s ability to create liens or make investments and may, among other things, preclude Mast from making distributions to its stockholders (either by paying dividends or redeeming stock) and taking other actions beneficial to its stockholders. In addition, investors could impose more one-sided investment terms and conditions on companies that have or are perceived to have limited remaining funds or limited ability to raise additional funds. The lower Mast s cash balance, the more difficult it is likely to be for it to raise additional capital on commercially reasonable terms, or at all.

Notwithstanding efforts on Mast s part to raise additional capital, adequate additional funding may not be available on acceptable terms, or on a timely basis, or at all. Mast may incur significant costs in pursuing, evaluating and negotiating particular capital-raising and/or strategic or partnering transactions, even if Mast s efforts prove unsuccessful.

Mast believes global economic conditions, such as volatility in the U.S. and international equity markets, may adversely impact its ability to raise additional capital. Mast s failure to raise capital as needed would have a material adverse effect on its financial condition and ability to pursue its business strategy and Mast potentially may be unable to continue as a going concern and required to liquidate its assets and dissolve the company.

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If Mast is unable to raise sufficient additional capital as needed, Mast may be forced to delay, reduce or discontinue development of its product candidates, partner them or dispose of its assets at inopportune times or pursue less expensive but higher-risk and/or lower-return development paths.

If Mast is not able to raise sufficient additional capital as needed, Mast may be required to delay, reduce or discontinue one or more of its development programs, to seek collaborators or buyers at an earlier stage than otherwise would be desirable or on terms less favorable than might otherwise be available, or to liquidate its assets and dissolve the company. For example, if Mast does not have sufficient capital, it may determine to delay or suspend planned or ongoing clinical or nonclinical studies or other development activities and/or not to conduct other studies or activities intended to enhance its intellectual property position, improve the probability of regulatory approval, or expand the scope of a product candidate s clinical benefit and market potential. Delays in and/or reduction of development activities could impair Mast s ability to realize the full clinical and market potential of a product candidate and have a material adverse effect on Mast s business and financial condition. In addition, suspension or discontinuation of a development program may be viewed negatively, which could adversely affect the price per share of Mast s common stock.

To the extent it discontinues independent development of a product candidate, Mast may not realize any value from its investment in the discontinued program. Even if Mast pursues a strategic option, such as partnering, selling or exclusively licensing the program to a third party, such an option may not be available on acceptable terms or at all, and Mast may not realize any return on its investment in the program.

In addition, if Mast determines its financial resources are insufficient to fund its operations even after implementing additional cost saving measures and reducing the scope of its operations, Mast may be required to dispose of or liquidate its assets at values significantly less than what Mast believes their values to be and at which they are carried on Mast s financial statements.

The process of developing and seeking regulatory approval of, and ultimately commercializing, investigational new drug products requires expenditure of substantial resources, and Mast cannot estimate with reasonable certainty the duration of or costs to complete its development programs.

Mast s capital requirements for the foreseeable future will depend in large part on, and could increase significantly as a result of, Mast s expenditures on its development programs. Future expenditures on Mast s development programs are subject to many uncertainties, and will depend on, and could increase significantly as a result of, many factors, including:

- the number, size, complexity, results and timing of Mast s drug development programs;
- the timing and terms of any collaborative or other strategic arrangement that Mast may establish;
- the number of clinical and nonclinical studies necessary to demonstrate acceptable evidence of the safety and efficacy of a product candidate in a particular indication;

the number of patients who participate, the rate of enrollment, and the ratio of randomized to evaluable patients in each clinical study;

the number and location of sites and the rate of site initiation in each study;

the duration of patient treatment and follow-up;

the potential for additional safety monitoring or other post-marketing studies that may be requested by regulatory agencies;

the time and cost to manufacture clinical trial material and commercial product, including process development and scale-up activities, and to conduct stability studies, which can last several years;

the degree of difficulty and cost involved in securing alternate manufacturers or suppliers of drug product, components or delivery devices, as necessary to meet FDA requirements and/or commercial demand;

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the costs, requirements, timing of, and the ability to, secure regulatory approvals;

the extent to which Mast increases its workforce and the costs involved in recruiting, training and incentivizing new employees;

the costs related to developing, acquiring and/or contracting for sales, marketing and distribution capabilities, supply chain management capabilities, and regulatory compliance capabilities, if Mast obtains regulatory approval for a product candidate and commercialize it without a partner;

competing technologies and market developments; and

the costs involved in establishing, enforcing or defending patent claims and other proprietary rights.

Mast may not be able to raise capital when needed or reduce other expenditures to offset expenditures on Mast s development programs, which could have a material adverse effect on its financial condition and ability to pursue its business strategy.

Mast s ability to raise capital may be limited by applicable laws and regulations.

Historically, Mast has raised capital primarily through the sale of its equity securities. In recent years, Mast has raised substantial funding through equity offerings conducted under shelf registration statements on Form S-3. Using a shelf registration statement on Form S-3 to raise additional capital generally takes less time and is less expensive than other means, such as conducting an offering under a Form S-1 registration statement. However, Mast s ability to raise capital using a shelf registration statement may be limited by, among other things, current SEC rules and regulations. Under current SEC rules and regulations, Mast must meet certain requirements to use a Form S-3 registration statement to raise capital without restriction as to the amount of the market value of securities sold thereunder. One such requirement is that the market value of Mast s outstanding common stock held by non-affiliates, or public float, be at least $75.0 million as of a date within 60 days prior to the date of filing the Form S-3. If Mast does not meet that requirement, then the aggregate market value of securities sold by Mast or on Mast s behalf under the Form S-3 in any 12-month period is limited to an aggregate of one-third of Mast s public float. Moreover, even if Mast meets the public float requirement at the time it files a Form S-3, SEC rules and regulations require that Mast periodically re-evaluate the value of its public float, and if, at a re-evaluation date, Mast s public float is less than $75.0 million, Mast would become subject to the one-third of public float limitation described above. If Mast s ability to utilize a Form S-3 registration statement for a primary offering of its securities is limited to one-third of Mast s public float, Mast may conduct such an offering pursuant to an exemption from registration under the Securities Act or under a Form S-1 registration statement, which Mast has done in the past, including in June 2013, and Mast would expect either of those alternatives to increase the cost of raising additional capital relative to utilizing a Form S-3 registration statement.

In addition, under current SEC rules and regulations, Mast s common stock must be listed and registered on a national securities exchange in order to utilize a Form S-3 registration statement (i) for a primary offering, if Mast s public float is not at least $75.0 million as of a date within 60 days prior to the date of filing the Form S-3, or a re-evaluation date, whichever is later, and (ii) to register the resale of Mast s securities by persons other than Mast (i.e., a resale offering). While currently Mast s common stock is listed on the NYSE MKT equities market, there can be no assurance that Mast will be able to maintain such listing. The NYSE MKT reviews the appropriateness of continued listing of any issuer that falls below the exchange s continued listing standards. For additional information regarding this risk, see the

risk factor below titled If Mast is unable to maintain compliance with NYSE MKT continued listing standards and policies, the NYSE MKT may commence proceedings to delist Mast s common stock, and in some cases, determine to suspend trading in Mast s common stock immediately without an opportunity to propose a plan that could enable Mast to regain compliance, which would likely cause the liquidity and market price of Mast s common stock to decline and you could lose your investment.

Mast s ability to timely raise sufficient additional capital also may be limited by the NYSE MKT s stockholder approval requirements for transactions involving the issuance of Mast s common stock or securities

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convertible into its common stock. For instance, the NYSE MKT requires that Mast obtain stockholder approval of any transaction involving the sale, issuance or potential issuance by Mast of its common stock (or securities convertible into its common stock) at a price less than the greater of book or market value, which (together with sales by Mast s officers, directors and principal stockholders) equals 20% or more of Mast s then outstanding common stock, unless the transaction is considered a public offering by the NYSE MKT staff. Based on 254,746,933 shares of Mast s common stock outstanding as of February 2, 2017 and the closing price per share of its common stock on such date, which was $0.13, Mast could not raise more than approximately $6.6 million without obtaining stockholder approval, unless the transaction is deemed a public offering or does not involve the sale, issuance or potential issuance by Mast of its common stock (or securities convertible into its common stock) at a price less than the greater of book or market value. In addition, certain prior sales by Mast may be aggregated with any offering it may propose in the future, further limiting the amount Mast could raise in any future offering that is not considered a public offering by the NYSE MKT staff and involves the sale, issuance or potential issuance by Mast of its common stock (or securities convertible into its common stock) at a price less than the greater of book or market value. The NYSE MKT also requires that Mast obtain stockholder approval if the issuance or potential issuance of additional shares will be considered by the NYSE MKT staff to result in a change of control of Mast.

Obtaining stockholder approval is a costly and time-consuming process. If Mast is required to obtain stockholder approval for a potential transaction, Mast would expect to spend substantial additional money and resources. In addition, seeking stockholder approval would delay Mast s receipt of otherwise available capital, which may materially and adversely affect Mast s ability to execute its current business strategy, and there is no guarantee Mast s stockholders ultimately would approve a proposed transaction. A public offering under the NYSE MKT rules typically involves broadly announcing the proposed transaction, which often times has the effect of depressing the issuer s stock price, as occurred following Mast s issuance of a press release on February 9, 2016 announcing a proposed underwritten public offering. Accordingly, the price at which Mast could sell its securities in a public offering may be less, and the dilution existing stockholders experience may in turn be greater, than if Mast were able to raise capital through other means.

Mast has significant goodwill and IPR&D and impairment of goodwill and IPR&D may have a significant adverse impact on Mast s future financial condition and results of operations.

Mast s goodwill and IPR&D assets, which resulted from its acquisitions of SynthRx and Aires Pharmaceuticals in 2011 and 2014, respectively, represent a significant portion of Mast s total assets. As of September 30, 2016, Mast had goodwill and IPR&D of approximately $11.6 million, representing approximately 29% of Mast s total assets. These intangible assets are subject to an impairment analysis whenever an event or change in circumstances indicates the carrying amount of such an asset may not be recoverable. Mast tests its goodwill and IPR&D for impairment annually, or more frequently if an event or change in circumstances indicates that the asset may be impaired. If an impairment exists, Mast would be required to record an impairment charge with respect to the impaired asset to Mast consolidated statements of operations and comprehensive loss. A significant impairment charge could have a material negative impact on Mast s financial condition and results of operations.

Events giving rise to impairment are difficult to predict and are an inherent risk in the pharmaceutical industry. Some of the potential risks that could result in impairment of Mast s goodwill and IPR&D include negative clinical study results, adverse regulatory developments, delay or failure to obtain regulatory approval, additional development costs, changes in the manner of Mast s use or development of vepoloxamer or AIR001, competition, earlier than expected loss of exclusivity, pricing pressures, higher operating costs, changes in tax laws, prices that third parties are willing to pay for Mast s IPR&D in an arm s-length transaction being less than the carrying value of Mast s IPR&D, and other market and economic environment changes or trends. Approximately $6.5 million of Mast s IPR&D, or approximately 77% of Mast s total acquired IPR&D, relates to the fair value of Mast s vepoloxamer program as of the date Mast

acquired SynthRx. Mast evaluated goodwill and its acquired IPR&D related to vepoloxamer for potential impairment as of September 30, 2016 in light of the

negative efficacy results in the Phase 3 study of vepoloxamer in sickle cell disease. As discussed in Note 4 Goodwill and IPR&D to Mast s condensed consolidated financial statements included in this proxy statement/prospectus/information statement, Mast tested for vepoloxamer-related IPR&D impairment based on a fair value assessment of vepoloxamer in ischemic stroke and determined that no impairment charge was required. Although Mast determined there was no impairment of its goodwill and IPR&D as of September 30, 2016, Mast s fair value assessments are based on significant assumptions that may prove to be wrong. In addition, events or changes in circumstances may lead to significant impairment charges on Mast s goodwill and/or IPR&D in the future, which could materially adversely affect Mast s financial condition and results of operations.

Loss of personnel, through reductions in force or otherwise, could adversely impact Mast s ability to successfully manage its business.

Mast began restructuring its organization during the fourth quarter of 2016 and has reduced its workforce by more than 70% since such time, and as of February 2, 2017, Mast had only seven full-time and three part-time employees. As a result, remaining employees may have to take on substantially more responsibility, resulting in greater workload demands and potential diversion of attention away from key areas of Mast s business. Discontinuation of the vepoloxamer clinical development programs and implementation of other cost-saving measures, including reductions in force, create uncertainty and can negatively affect staff morale, which may lead remaining employees to seek different employment. All of Mast s employment relationships are at-will and Mast may lose employees not affected by reductions in force at any time if they choose to terminate their employment with Mast. Loss of a significant proportion of Mast s employees and/or loss of key employees could not only serve as a distraction to remaining employees but could also cause some loss of institutional knowledge and divert significant management time and attention, which could negatively affect business strategy and execution, and Mast s results of operations and financial condition could suffer as a result.

Replacing key employees may be a difficult, costly and protracted process, and Mast may not have other personnel with the capacity to assume all of the responsibilities of a key employee upon his/her departure. Transition periods can be difficult to manage and may cause disruption to Mast s business. In addition, there may be intense competition from other companies and organizations for qualified personnel. Other companies and organizations with which Mast competes for personnel may have greater financial and other resources and different risk profiles than Mast does, and a history of successful development and commercialization of their product candidates, which may make them more attractive employers. Mast s ability to compete for qualified personnel also may be adversely affected by Mast s highly volatile stock price. The value of equity awards Mast may offer to candidates to induce their employment and to Mast s employees to retain and incentivize them is significantly affected by movements in Mast s stock price that Mast cannot control and may at any time be insufficient to counteract more lucrative offers from other companies. If Mast cannot attract and retain skilled personnel, as needed, Mast may not achieve its development and other goals.

In the meantime, the success of Mast s business likely will depend in part on Mast s ability to develop and maintain relationships with respected service providers and industry-leading consultants and advisers. If Mast cannot develop and maintain such relationships, as needed, the rate and success at which Mast can develop and commercialize product candidates may be limited. In addition, Mast s outsourcing strategy, which has included engaging consultants that spend considerable time in Mast s office to manage key functional areas, may subject Mast to scrutiny under labor laws and regulations, which may divert management time and attention and have an adverse effect on Mast s business and financial condition.

Mast expends substantial resources to comply with laws and regulations relating to public companies, and any failure to maintain compliance could subject Mast to regulatory scrutiny and cause investors to lose confidence in Mast, which could harm Mast s business and have a material adverse effect on its stock price.

Laws and regulations affecting public companies, including provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and the Sarbanes-Oxley Act of 2002, or SOX, and the related rules

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and regulations adopted by the SEC and by the NYSE MKT have resulted in, and will continue to result in, significant costs to Mast as it evaluates the implications of these rules and respond to their requirements. For example, compliance with Section 404 of SOX, including performing the system and process documentation and evaluation necessary to issue Mast s annual report on the effectiveness of Mast s internal control over financial reporting and, if applicable, obtain the required attestation report from Mast s independent registered public accounting firm, requires Mast to incur substantial expense and expend significant management time. Further, Mast has in the past discovered, and may in the future discover, areas of internal controls that need improvement. If Mast identifies deficiencies in its internal controls that are deemed to be material weaknesses, Mast could become subject to scrutiny by regulatory authorities and lose investor confidence in the accuracy and completeness of its financial reports, which could have a material adverse effect on Mast s stock price. Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations, including the possibility of human error and circumvention by collusion or overriding of controls. Accordingly, even an effective internal control system may not prevent or detect material misstatements on a timely basis, or at all. Also, previously effective controls may become inadequate over time as a result of changes in Mast s business or operating structure, and Mast may fail to take measures to evaluate the adequacy of and update these controls, as necessary, which could lead to a material misstatement. For example, loss of staff and other resources in Mast s accounting department as a result of cost-saving measures or otherwise, could negatively impact its ability to maintain adequate internal control over financial reporting and/or disclosure controls and procedures and the accuracy and timeliness of Mast s financial reporting. Consequently, investor confidence in Mast s financial reports may be adversely affected, which could negatively impact its stock price.

In addition, new laws and regulations could make it more difficult or more expensive for Mast to obtain certain types of insurance, including director and officer liability insurance, and Mast may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the coverage that is the same or similar to its current coverage. The impact of these events could also make it more difficult for Mast to attract and retain qualified persons to serve on the board of directors or board committees, and as executive officers. Mast cannot predict or estimate with any reasonable accuracy the total amount or timing of the costs Mast may incur to comply with these laws and regulations.

Mast s business and operations would suffer in the event of computer system failures, cyber-attacks on its systems or deficiency in its cyber security.

Despite the implementation of security measures, Mast s internal computer systems, and those of third parties on which it relies, are vulnerable to damage from computer viruses, unauthorized access, malware, natural disasters, fire, terrorism, war and telecommunication, electrical failures, cyber-attacks or cyber-intrusions over the Internet, attachments to emails, persons inside Mast s organization, or persons with access to systems inside its organization. The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. In addition, Mast s systems or those of third parties on which Mast relies safeguard important confidential personal data regarding Mast s employees and patients enrolled in its clinical trials. If a disruption event were to occur and cause interruptions in Mast s operations, it could result in a disruption of its drug development programs. For example, the loss of clinical trial data from completed, ongoing or planned clinical trials could result in delays in Mast s regulatory approval efforts and significantly increase Mast s costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss of or damage to Mast s data or applications, or inappropriate disclosure of confidential or proprietary information, Mast could incur liability and development of its product candidates could be delayed.

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Mast s employees, independent contractors and consultants, principal investigators, CROs, CMOs and other vendors, and any future commercial partners may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could cause significant liability for Mast and harm Mast s reputation.

Mast is exposed to the risk that its employees, independent contractors and consultants, principal investigators, CROs, CMOs and other vendors, and any future commercial partners may engage in fraudulent conduct or other misconduct, including intentional failures to comply with FDA regulations or similar regulations of comparable foreign regulatory authorities, to provide accurate information to the FDA or comparable foreign regulatory authorities, to comply with manufacturing standards required by cGMP or that Mast establish, to comply with federal and state healthcare fraud and abuse laws and regulations and similar laws and regulations established and enforced by comparable foreign regulatory authorities, and to report financial information or data accurately or disclose unauthorized activities to Mast. The misconduct of Mast s employees and others Mast engages to provide services to it could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to Mast s reputation. Mast maintains a code of business conduct and ethics for its directors, officers and employees, but it is not always possible to identify and deter such misconduct, and the precautions Mast takes to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting Mast from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against Mast, and Mast is not successful in defending ourselves or asserting Mast s rights, those actions could have a significant impact on Mast s business and results of operations, including the imposition of significant fines or other sanctions.

Mast s operations might be interrupted by the occurrence of a natural disaster or other catastrophic event.

Mast s corporate headquarters are located in a single commercial facility in San Diego, California. Important documents and records, including copies of Mast s regulatory documents and other records for Mast s product candidates, are located at Mast s facilities and Mast depends on its facilities for the continued operation of its business. Natural disasters and other catastrophic events, such as wildfires and other fires, earthquakes and extended power interruptions, which have impacted San Diego businesses in the past, and terrorist attacks or severe weather conditions, could significantly disrupt Mast s operations and result in additional, unplanned expense. As a small company with limited resources, Mast has not prepared or implemented a formal business continuity or disaster recovery plan and any natural disaster or catastrophic event could disrupt Mast s business operations and result in setbacks to Mast s development programs. Even though Mast believes it carries commercially reasonable insurance, Mast might suffer losses that are not covered by or exceed the coverage available under these insurance policies.

Risks Related to Mast s Drug Development and Commercialization

Mast depends on the successful completion of clinical studies of its product candidates and positive results in prior clinical studies do not ensure that ongoing or future clinical studies will be successful.

Human pharmaceutical products generally are subject to rigorous nonclinical testing and clinical studies and other approval procedures mandated by the FDA and foreign regulatory authorities. Before obtaining regulatory approval for the commercial sale of a product candidate, Mast must demonstrate through additional clinical studies that the drug product is safe and effective for use in the target indication.

Clinical studies are expensive, difficult to design and implement, can take many years to complete, and outcomes are inherently uncertain. A drug product may fail to demonstrate positive results at any stage of testing despite having progressed satisfactorily through nonclinical testing and initial clinical studies. In addition, interim results of a clinical

study do not necessarily predict final results. Further, clinical study data frequently are susceptible to varying interpretations. Medical professionals and/or regulatory authorities may analyze or weigh study data differently than Mast does, resulting in delay or failure to obtain marketing approval for a product candidate.

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If Mast licenses rights to develop its product candidates to independent third parties or otherwise permits such third parties to evaluate its product candidates in clinical studies, Mast may have limited control over those clinical studies. For example, AIR001 is being evaluated in investigator-sponsored clinical studies over which Mast has limited or no control over the study design or implementation and Mast cannot provide assurance that any of those studies will be completed on anticipated timelines or at all. Any safety or efficacy concern identified in a third-party sponsored study could adversely affect Mast s or another licensee s development of Mast s product candidate and prospects for its regulatory approval, even if the data from that study are susceptible to varying interpretations and analyses.

There is significant risk that ongoing and future clinical studies of Mast s product candidates are unsuccessful. Negative or inconclusive results could cause the FDA and other regulatory authorities to require that Mast repeat or conduct additional clinical studies, which could significantly increase the time and expense associated with development of that product candidate or cause Mast to elect to discontinue one or more clinical programs. For example, in September 2016, Mast announced that its Phase 3 clinical study of vepoloxamer in sickle cell disease did not achieve its primary or secondary efficacy endpoints. Shortly thereafter and as a result, Mast decided to discontinue its clinical development programs for vepoloxamer in sickle cell disease and heart failure. Failure to complete a clinical study of a product candidate or an unsuccessful completion of a clinical study of a product candidate could have a material adverse effect on Mast s business and/or stock price.

All ongoing and currently planned clinical studies of Mast s lead product candidate, AIR001, are investigator-sponsored studies over which Mast have limited or no control.

AIR001 is Mast s lead product candidate and is being evaluated in multiple, investigator-sponsored Phase 2 clinical studies for the treatment of patients with HFpEF. As a result, Mast believes its capital requirements for advancing development of AIR001 in HFpEF are significantly less than if Mast were to conduct this Phase 2 clinical testing itself. However, because Mast is not the sponsor of these studies, Mast has limited or no control over the study design or execution, including whether the study will enroll a sufficient number of subjects or be completed on schedule, if at all. As a result, successful completion of these studies is largely outside of Mast s control.

Delays in commencement and completion of clinical studies are common and have many causes. Delays in clinical studies of Mast s product candidates could increase overall development costs and jeopardize Mast s ability to obtain regulatory approval and successfully commercialize any approved products.

Clinical testing typically is expensive, can take many years to complete, and its outcome is inherently uncertain. Clinical studies may not commence on time or be completed on schedule, if at all. The commencement and completion of clinical studies can be delayed for a variety of reasons, including:

- inability to raise sufficient funding, if necessary, to initiate or continue a clinical study;
- delays in obtaining regulatory approval to commence a clinical study;
- delays in identifying and reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical study sites and investigators, which agreements can be subject to extensive negotiation and may vary significantly among study sites;

delays in obtaining institutional review board, or IRB, approval to conduct a clinical study at a prospective site;

delays in reaching agreements on acceptable terms with prospective contract manufacturing organizations, or CMOs, or other vendors for the production and supply of clinical trial material and, if necessary, drug administration devices, which agreements can be subject to extensive negotiation;

delays in the production and/or delivery of sufficient quantities of clinical trial material or drug administration devices from Mast s CMOs and other vendors to initiate or continue a clinical study;

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- delays on the part of Mast s CROs, CMOs, and other third-party contractors in developing procedures and protocols or otherwise conducting activities in accordance with applicable policies and procedures and in accordance with agreed upon timelines;

- delays in identifying and hiring or engaging, as applicable, additional employees or consultants to assist in managing clinical study-related activities;

- delays in recruiting and enrolling individuals to participate in a clinical study;

- delays caused by subjects dropping out of a clinical study due to side effects, difficulties in adhering to the study protocol, or otherwise;

- delays in having subjects complete participation in a clinical study, including returning for post-treatment follow-up;

- delays resulting from study sites dropping out of a trial or providing inadequate staff support for the study;

- Mast s suspension of enrollment at a study site or the imposition of a clinical hold by the FDA or other regulatory authority following an inspection of clinical study operations at study sites or finding of a drug-related serious adverse event; and

- delays in quality control/quality assurance procedures necessary for study database lock and analysis of unblinded data.

Patient enrollment, a critical component to successful completion of a clinical study, is affected by many factors, including the size and nature of the study subject population, the proximity of patients to clinical sites, the eligibility criteria for the study, the design of the clinical study, competing clinical studies and clinicians and patients perceptions as to the potential advantages of the drug being studied in relation to available alternatives, including therapies being investigated by other companies. Further, completion of a clinical study and/or its results may be adversely affected by failure to retain subjects who enroll in a study but withdraw due to adverse side effects, perceived lack of efficacy, improvement in condition before treatment has been completed, or for personal issues or by subjects who fail to return for or complete post-treatment follow-up.

Clinical studies may not begin on time or be completed in the time frames Mast anticipates and may be more costly than Mast anticipates for a variety of reasons, including one or more of those described above. The length of time necessary to complete clinical studies varies significantly and is difficult to predict accurately. Mast may make statements regarding anticipated timing for completion of enrollment in and/or availability of results from its clinical studies, but such predictions are subject to a number of significant assumptions and actual timing may differ materially for a variety of reasons, including patient enrollment rates, length of time needed to prepare raw study data for analysis and then to review and analyze it, and other factors described above. In addition, in the case of AIR001, Mast is supporting but is not sponsoring the ongoing Phase 2 clinical studies and, as a result, the continuation and completion of and receipt of data from those studies may be largely outside of Mast s control. If Mast experiences

delays in the completion of a clinical study, if a clinical study is terminated, or if failure to conduct a study in accordance with regulatory requirements or the study s protocol leads to deficient safety and/or efficacy data, the regulatory approval and/or commercial prospects for Mast s product candidate may be harmed and Mast s ability to generate product revenue will be delayed. In addition, any delays in completing Mast s clinical studies likely will increase its development costs. Further, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical studies may ultimately lead to the denial of regulatory approval of a product candidate. Even if Mast is able to ultimately commercialize Mast s product candidates, other therapies for the same indications may be introduced to the market in the interim and establish a competitive advantage or diminish the need for Mast s products.

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Clinical studies are very expensive, difficult to design and implement, often take many years to complete, and the outcome is inherently uncertain.

Clinical development of pharmaceutical products for humans generally is very expensive, takes many years to complete and failure can occur at any stage of clinical testing. Mast estimates that clinical development of its product candidates will take several additional years to complete, but because of the variety of factors that can affect the design, timing and outcome of clinical studies, Mast is unable to estimate the actual funds required to complete research and development and commercialize Mast s product candidates. Mast will need significant additional capital to continue to advance AIR001 for the treatment of HFpEF.

Failure at every stage of clinical testing is not uncommon and Mast may encounter problems that would require additional, unplanned studies or cause Mast to abandon a clinical development program. For example, Mast determined to discontinue clinical development of vepoloxamer in sickle cell disease based upon the top-line results of the Phase 3 study of vepoloxamer in sickle cell disease. If results of ongoing investigator-sponsored clinical studies of AIR001 in HFpEF are negative or inconclusive, Mast may determine not to pursue additional clinical studies in HFpEF or any other indication.

In addition, a clinical study may be suspended or terminated by Mast, an IRB, a data safety monitoring board, the FDA or other regulatory authorities due to a number of factors, including:

- lack of adequate funding to continue the study;
- failure to conduct the study in accordance with regulatory requirements or the study s protocol;
- inspection of clinical study operations or sites by the FDA or other regulatory authorities resulting in the imposition of a clinical hold;
- unforeseen safety issues, including adverse side effects; or
- changes in governmental regulations or administrative actions.

Changes in governmental regulations and guidance relating to clinical studies may occur and Mast may need to amend study protocols to reflect these changes, or Mast may amend study protocols for other reasons. Amendments may require Mast to resubmit protocols to IRBs for reexamination or renegotiate terms with CROs, study sites and investigators, all of which may adversely impact the costs or timing of or Mast s ability to successfully complete a trial.

There is significant uncertainty regarding the regulatory approval process for any investigational new drug, substantial further testing and validation of Mast s product candidates and related manufacturing processes are required, and regulatory approval may be conditioned, delayed or denied, which could delay or prevent Mast from successfully marketing Mast s product candidates and substantially harm its business.

Human pharmaceutical products generally are subject to rigorous nonclinical testing and clinical studies and other approval procedures mandated by the FDA and foreign regulatory authorities. Various federal and foreign statutes and regulations also govern or influence the manufacturing, safety, labeling, storage, record keeping and marketing of pharmaceutical products. The process of obtaining these approvals and the subsequent compliance with appropriate U.S. and foreign statutes and regulations is time-consuming and requires the expenditure of substantial resources.

Mast expects its MAST platform to accelerate development of vepoloxamer as compared to other new molecular entities for therapeutic use in humans. For example, Mast considers vepoloxamer Phase 2 ready for clinical development in ischemic stroke. However, this expectation is predicated on the belief that regulatory authorities, such as the FDA, will consider clinical and nonclinical studies of vepoloxamer and poloxamer 188 conducted by prior sponsors and/or conducted in other diseases or conditions supportive of clinical development of vepoloxamer in stroke, which may not be the case for a variety of reasons. If regulatory agencies take the

position that prior-sponsor studies of vepoloxamer and poloxamer 188 do not support the safety and efficacy of Mast s vepoloxamer-based product candidates, they may require additional testing of Mast s product candidates prior to allowing Mast to proceed with proposed clinical studies or ultimately prior to granting marketing approval, which could require Mast to expend substantial additional resources and significantly extend the timeline for clinical development of vepoloxamer in stroke.

Significant uncertainty exists with respect to the regulatory approval process for any investigational new drug, including Mast s lead product candidate, AIR001. Regardless of guidance the FDA may give a drug s sponsor during its development, the FDA retains complete discretion in deciding whether to accept a NDA for filing or, if accepted, approve an NDA. There are many components to an NDA submission in addition to clinical study data. For example, the FDA will review Mast s internal systems and processes, as well as those of Mast s CROs, CMOs and other vendors, related to development of its product candidate, including those pertaining to Mast s clinical studies and manufacturing processes. Before accepting an NDA for review or before approving the NDA, the FDA may request that Mast provide additional information that may require significant resources and time to generate and there is no guarantee that Mast s product candidate will be approved for any indication for which Mast may apply. The FDA may choose not to approve an NDA for any of a variety of reasons, including a decision related to the safety or efficacy data, manufacturing controls or systems, or for any other issues that the agency may identify related to the development of Mast s product candidate. Even if one or more Phase 3 clinical studies are successful in providing statistically significant evidence of the efficacy and safety of the investigational drug, the FDA may not consider efficacy and safety data from the submitted studies adequate scientific support for a conclusion of effectiveness and/or safety and may require an additional Phase 3 or other studies prior to granting marketing approval. If this were to occur, the overall development cost for the product candidate would be substantially greater and its competitors may bring products to market before Mast, which could impair its ability to generate revenues from the product and have a material adverse effect Mast s business, financial condition and results of operations.

Further, development of Mast s product candidates and/or regulatory approval may be delayed for reasons beyond Mast s control. For example, U.S. federal government shut-down or budget sequestration, such as occurred during 2013, may result in significant reductions to the FDA s budget and operations, which may lead to slower response times and longer review periods, potentially affecting Mast s ability to progress development of or obtain regulatory approval for Mast s product candidates.

Even if the FDA grants approval, the conditions or scope of the approval may limit successful commercialization of the product and impair Mast s ability to generate substantial sales revenue. For example, the FDA may not approve the labeling claims for Mast s products that Mast requests and believes are necessary or desirable for successful commercialization, or may grant marketing approval contingent on the performance of costly post-approval clinical trials or subject to warnings or contraindications. Additionally, even after granting approval, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for its products will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, and continued compliance with current good manufacturing processes, or cGMP, good clinical practices, international conference on harmonization regulations and good laboratory practices, which are regulations and guidelines that are enforced by the FDA for all of its clinical development and for any clinical studies that Mast conducts post-approval. The FDA may decide to withdraw approval, add warnings or narrow the approved indications in the product label, or establish risk management programs that could restrict distribution of Mast s products. These actions could result from, among other things, safety concerns, including unexpected side effects or drug-drug interaction problems, or concerns over misuse of a product. If any of these actions were to occur following approval, Mast may have to discontinue commercialization of the product, limit its sales and marketing efforts, and/or conduct post-approval studies, which in turn could result in significant expense and delay or limit Mast s ability to generate sales revenues.

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Mast does not have, and does not have plans to establish, any manufacturing facilities and are dependent on third parties for the manufacture and supply of its clinical trial materials, and the loss of any of these vendors or their failure to provide Mast with an adequate supply of clinical trial material in a timely manner and on commercially acceptable terms, or at all, could harm Mast s business.

Mast does not have, and does not have plans to establish, its own manufacturing facilities. For clinical trial material, Mast entered into supply agreements with third parties for both API and finished drug product, but Mast s agreements may not cover all of its clinical trial material needs and Mast may need to negotiate new or amended agreements with these CMOs and other vendors or rely on individual proposals or statements of work, which inherently involves uncertainty as to ongoing supply and may result in delays in the completion of ongoing clinical studies or initiation of new studies. In addition, as development of Mast s product candidates progress, Mast will need to negotiate agreements for commercial supply; however, Mast may not be able to reach agreement on acceptable terms. If Mast fails to maintain relationships with its current CMOs and other vendors, Mast may not be able to complete development of its product candidates, or market them, if approved, on a timely basis, or at all, which would have a material and adverse effect on its business.

In addition, in connection with terminating its clinical development of vepoloxamer, Mast also terminated its agreements with its vepoloxamer-related CMOs and other vendors. Consequently, if Mast were to determine to restart clinical development of vepoloxamer it would have to establish new CMO relationships.

Third-party manufacturers and suppliers may not perform as agreed or may terminate their agreements with Mast. For example, because these third parties provide manufacturing services to a number of other pharmaceutical companies, they may experience capacity constraints or choose to prioritize one or more of their other customers over Mast. Any significant problem that Mast s manufacturers or suppliers experience could delay or interrupt its supply of clinical trial material or commercial product until the manufacturer or supplier cures the problem or until Mast locate, negotiate for and validate an alternative source of supply, if one is available.

In addition to Mast s reliance on third parties to manufacture clinical trial material, Mast relies on them to conduct or assist in conducting key manufacturing development activities, including qualification of equipment, developing and validating methods, defining critical process parameters, releasing component materials and conducting stability testing, among other things. If these third parties are unable to perform successfully in a timely manner, whether for technical, financial or other reasons, Mast may be unable to secure clinical trial material, which likely would delay the initiation, conduct or completion of its clinical studies, which, in turn, likely would have a material and adverse effect on Mast s business.

All manufacturers of Mast s clinical trial material and, as applicable, commercial product, including API manufacturers, must comply with cGMP requirements enforced by the FDA through its facilities inspection program and applicable requirements of foreign regulatory authorities. These requirements include quality control, quality assurance and the maintenance of records and documentation. Manufacturers of Mast s clinical trial material may be unable to comply with these cGMP requirements and with other FDA, state and foreign regulatory requirements. While Mast or its representatives generally monitor and audit Mast s manufacturers systems, Mast has little control over their ongoing compliance with these regulations. Failure to comply with these requirements may result in fines and civil penalties, suspension of production, suspension or delay in product approval, product seizure or recall, or withdrawal of product approval.

Currently, Mast does not have alternative sources to backup Mast s primary sources of clinical trial material. Identification of and discussions with other vendors may be protracted and/or unsuccessful. Therefore, if Mast s primary sources become unable or unwilling to perform, Mast could experience protracted delays or interruptions in

the supply of clinical trial material and, ultimately, product for commercial sale, which could materially and adversely affect Mast s development programs, commercial activities, operating results and financial condition. In addition, the FDA may require that Mast has an alternate manufacturer of a drug product

before approving it for marketing and sale in the U.S. and securing such alternate manufacturer before approval of an NDA could result in considerable additional time and cost prior to NDA approval.

Any new manufacturer or supplier of finished drug product or its component materials, including API, would be required to qualify under applicable regulatory requirements and would need to have sufficient rights under applicable intellectual property laws to the method of manufacturing such product or ingredients. The FDA may require Mast to conduct additional clinical studies, collect stability data and provide additional information concerning any new supplier, or change in a validated manufacturing process, including scaling-up production, before Mast could distribute products from that manufacturer or supplier or revised process. For example, if Mast were to engage a third party other than Mast s current CMOs to supply drug product for future clinical trial material or commercial product, the FDA may require Mast to conduct additional clinical and nonclinical studies to ensure comparability of the drug substance manufactured by Mast s current CMOs to drug substance manufactured by the new supplier. In addition to the potential for such requirements to result in significant interruption to development and commercialization of its product candidates, Mast likely would incur substantial additional costs to comply with the additional requirements.

The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of pharmaceutical products often encounter difficulties in production, particularly in scaling-up initial production. These problems include difficulties with production costs and yields, quality control, including stability of the product candidate and quality assurance testing, and shortages of qualified personnel. None of Mast s product candidates has been manufactured at the scale Mast believe will be necessary to maximize its commercial value and, accordingly, Mast may encounter difficulties in attempting to scale-up production and may not succeed in that effort on a timely basis or at all, including as a result of delaying activities necessary to establish commercial-scale production due to capital constraints. In addition, the FDA or other regulatory authorities may impose additional requirements as Mast scale-up initial production capabilities, which may delay Mast s scale-up activities or add expense.

If Mast s manufacturers encounter any of these difficulties or otherwise fail to comply with their contractual obligations or Mast delays in entering into commercial supply agreements due to capital constraints, Mast may have insufficient quantities of material to support ongoing and/or planned clinical studies or to meet commercial demand, if approved. In addition, any delay or interruption in the supply of materials necessary or useful to manufacture Mast s product candidates could delay the completion of its clinical studies, increase the costs associated with Mast s development programs and, depending upon the period of delay, require Mast to commence new clinical studies at significant additional expense or terminate the studies completely. Delays or interruptions in the supply of commercial product could result in increased cost of goods sold and lost sales. Mast cannot provide assurance that manufacturing or quality control problems will not arise in connection with the manufacture of Mast s clinical trial material or commercial product, if approved, or that third-party manufacturers will be able to maintain the necessary governmental licenses and approvals to continue manufacturing such clinical trial material or commercial product, as applicable. In addition, vepoloxamer currently is manufactured outside the U.S. and, as a result, Mast may experience interruptions in supply due to shipping or customs difficulties or regional instability. Any of the above factors could cause Mast to delay or suspend anticipated or ongoing trials, regulatory submissions or commercialization of Mast s product candidates, entail higher costs or result in its being unable to effectively commercialize its products. Mast s dependence upon third parties for the manufacture of its clinical trial material may adversely affect its future costs and its ability to develop and commercialize product candidates on a timely and competitive basis.

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Mast relies significantly on third parties to conduct its nonclinical testing and clinical studies and other aspects of Mast s development programs and if those third parties do not satisfactorily perform their contractual obligations or meet anticipated deadlines, the development of its product candidates could be adversely affected.

Mast does not employ personnel or possess the facilities necessary to conduct many of the activities associated with its programs. Mast engages consultants, advisors, CROs, CMOs and others to assist in the design and conduct of nonclinical and clinical studies of Mast s product candidates, with interpretation of the results of those studies and with regulatory activities, and Mast expects to continue to outsource a significant amount of such activities. As a result, many important aspects of Mast s development programs are and will continue to be outside its direct control, and Mast s third-party service providers may not perform as required or expected. Further, such third parties may not be as committed to the success of Mast s programs as employees and, therefore, may not devote the same time, thoughtfulness or creativity to completing projects or problem-solving as would an employee. To the extent Mast is unable to successfully manage the performance of third-party service providers, its business may be adversely affected.

The CROs that Mast engages to execute its clinical studies play a significant role in the conduct of the studies, including the collection and analysis of study data, and Mast likely will depend on CROs and clinical investigators to conduct future clinical studies and to assist in analyzing data from completed studies and developing regulatory strategies for its product candidates. Individuals working at the CROs with which Mast contract, as well as investigators at the sites at which its studies are conducted, are not Mast s employees, and Mast has limited control over the amount or timing of resources that they devote to its programs. As discussed above, with respect to Mast s AIR001 program, because it is not the sponsor of the ongoing clinical studies of AIR001, Mast s control over these studies is further limited. If Mast s CROs, study investigators, and/or third-party sponsors fail to devote sufficient time and resources to studies of its product candidates, if they do not comply with all regulatory and contractual requirements, or if their performance is substandard, it may delay commencement and/or completion of these studies, submission of applications for regulatory approval, regulatory approval, and commercialization of Mast s product candidates. Failure of CROs to meet their obligations to Mast could adversely affect development of its product candidates. For example, in 2006, Mast engaged a CRO to assist with the primary conduct of Mast s bioequivalence study of Exelbine, including monitoring participating clinical sites to ensure compliance with regulatory requirements. FDA guidance recommends that clinical sites randomly select and retain reserve samples of study drugs used in bioequivalence studies. However, the clinical sites that participated in Mast s bioequivalence study of Exelbine failed to do so. In August 2011, Mast received a complete response letter from the FDA stating that the authenticity of the study drugs used in that bioequivalence study could not be verified and, consequently, the study would need to be repeated to address that deficiency.

In addition, CROs Mast engages may have relationships with other commercial entities, some of which may compete with Mast. If they assist Mast s competitors at Mast s expense, it could harm Mast s competitive position. Moreover, if a CRO fails to perform during a clinical study, Mast may not be able to enter into arrangements with alternative CROs on acceptable terms or in a timely manner, or at all. Switching CROs may increase costs and divert management time and attention. In addition, there likely would be a transition period when a new CRO commences work. These challenges could result in delays in the commencement or completion of its clinical studies, which could materially impact Mast s ability to meet its desired development timelines and have a material adverse impact on Mast s business and financial condition.

Mast s product candidates may cause undesirable side effects or have other properties that could delay or prevent their clinical development, regulatory approval or commercialization.

Undesirable side effects caused by Mast s product candidates could interrupt, delay or halt clinical studies and could result in the denial of regulatory approval by the FDA or other regulatory authorities for any or all indications, and in turn prevent Mast from commercializing its product candidates.

If any of Mast s product candidates receive marketing approval and Mast or others later identify undesirable side effects caused by the product or, if applicable, the reference product:

- regulatory authorities may require the addition of labeling statements, such as a black box warning or a contraindication;
- regulatory authorities may withdraw their approval of the product;
- Mast may be required to change the way the product is administered, conduct additional clinical studies or change the labeling of the product; and
- Mast s reputation may suffer.

Any of these events could prevent Mast from achieving or maintaining market acceptance of the affected product or could substantially increase the costs and expenses of commercializing the product, which in turn could delay or prevent Mast from generating significant revenue from its sale.

Mast may not achieve its projected development goals in the time frames Mast announces.

Mast set goals for and make public statements regarding its estimates of the timing for accomplishing certain objectives material to successful development of its product candidates. The actual timing of these events can vary, sometimes dramatically, due to many factors, including delays or failures in Mast s nonclinical testing, clinical studies and manufacturing and regulatory activities and the uncertainties inherent in the regulatory approval process. From time to time Mast provides estimates for the completion of enrollment of or announcement of data from clinical studies of its product candidates. However, predicting the rate of enrollment or the time from completion of enrollment to announcement of data for any clinical study requires Mast to make a number of significant assumptions that may prove to be incorrect. In addition, for studies sponsored by independent third parties, Mast has even less control over whether the study meets anticipated timelines. If, as a clinical study progresses, Mast gains reliable information that materially impacts its assumptions, Mast will adjust its estimates. Even so, as discussed in other risk factors above, Mast s estimated enrollment rates and the actual rates may differ materially and the time required to complete enrollment of any clinical study may be considerably longer than Mast estimates. In addition, even if Mast completes enrollment as expected, it may take longer than anticipated to prepare the data for review and then to review, analyze and announce the data, as was the case with Mast s Phase 3 study of vepoloxamer in sickle cell disease. Such delays may adversely affect Mast s financial condition and results of operations.

Even if Mast completes a clinical study with successful results, Mast may not achieve its projected development goals in the time frames it initially anticipates or announces. If a development plan for a product candidate becomes more extensive and costly than anticipated, Mast may determine that the associated time and cost are not financially justifiable and, as a result, discontinue development in a particular indication or of the product candidate as a whole. Any such action may be viewed negatively, which could adversely affect Mast s stock price.

In addition, changes may occur in regulatory requirements or policy during the period of product development and/or regulatory review of an NDA that relate to the data required to be included in NDAs. A change in regulatory policy that is not formalized or publicly announced may result in Mast s submission of an NDA that the FDA or a foreign

regulatory agency deems insufficient to support product approval, which could substantially increase the time and cost associated with seeking regulatory approval of a product candidate.

Throughout development, Mast must provide adequate assurance to the FDA and other regulatory authorities that Mast can consistently produce Mast s product candidates in conformance with cGMP and other regulatory standards. As discussed above, Mast relies on CMOs for the manufacture of clinical, and future commercial, quantities of Mast s product candidates. If future FDA or other regulatory authority inspections identify cGMP compliance issues at these third-party facilities, production of Mast s clinical trial material or, in the future, commercial product, could be disrupted, causing potentially substantial delay in development or commercialization of Mast s product candidates.

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Even if Mast receives regulatory approval for a product candidate, Mast may face development and regulatory difficulties that could materially and adversely affect its business, financial condition and results of operations and cause Mast s stock price to decline.

Even if initial regulatory approval is obtained, or as a condition to the initial approval, the FDA or a foreign regulatory agency may impose significant restrictions on a product s indicated uses or marketing or impose ongoing requirements for potentially costly post-approval studies or marketing surveillance programs, any of which would limit the commercial potential of the product. Mast s product candidates also will be subject to ongoing FDA requirements related to the manufacturing processes, labeling, packaging, storage, distribution, advertising, promotion, record-keeping and submission of safety and other post-market information regarding the product. For instance, the FDA may require changes to approved drug labels, require post-approval clinical studies and impose distribution and use restrictions on certain drug products. In addition, approved products, manufacturers and manufacturers facilities are subject to continuing regulatory review and periodic inspections. If previously unknown problems with a product are discovered, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, the FDA may impose restrictions on that product or Mast, including requiring withdrawal of the product from the market. If Mast or a CMO of ours fail to comply with applicable regulatory requirements, a regulatory agency may:

issue warning letters or untitled letters;

impose civil or criminal penalties;

suspend or withdraw regulatory approval;

suspend or terminate any ongoing clinical studies;

refuse to approve pending applications or supplements to approved applications;

exclude Mast s product from reimbursement under government healthcare programs, including Medicaid or Medicare;

impose restrictions or affirmative obligations on Mast s or Mast s CMO s operations, including costly new manufacturing requirements;

close the facilities of a CMO; or

seize or detain products or require a product recall.

If any product candidates for which Mast receives regulatory approval fails to achieve significant market acceptance among the medical community, patients or third-party payers, the revenue Mast generates from its sales will be limited and Mast s business may not be profitable.

Mast s success will depend in substantial part on the extent to which Mast s product candidates, if approved, are accepted by the medical community and patients and reimbursed by third-party payers, including government payers. The degree of market acceptance with respect to each of its approved products, if any, will depend upon a number of factors, including:

the safety and efficacy of Mast s product demonstrated in clinical studies;

acceptance in the medical and patient communities of Mast s product as a safe and effective treatment;

the perceived advantages of Mast s product over alternative treatments, including with respect to the incidence and severity of any adverse side effects and the cost of treatment;

the indications for which Mast s product is approved;

claims or other information (including limitations or warnings) in Mast s product s approved labeling;

reimbursement and coverage policies of government and other third-party payers;

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pricing and cost-effectiveness of Mast s product relative to alternative treatments;

availability of alternative treatments;

the prevalence of off-label substitution of chemically equivalent products or alternative treatments; and

the resources Mast devotes to marketing its product and restrictions on promotional claims Mast can make with respect to the product.

Mast cannot predict with reasonable accuracy whether physicians, patients, healthcare insurers or health maintenance organizations, or the medical community in general, will accept or utilize any of Mast s products. If Mast s product candidates are approved but do not achieve an adequate level of acceptance by these parties, Mast may not generate sufficient revenue to become or remain profitable. In addition, Mast s efforts to educate the medical community and third-party payers regarding benefits of its products may require significant resources and may never be successful.

If Mast determines that a product candidate may not achieve adequate market acceptance or that the potential market size does not justify additional expenditure on the program, Mast may reduce its expenditures on the development and/or the process of seeking regulatory approval of the product candidate while Mast evaluates whether and on what timeline to move the program forward.

Even if Mast receives regulatory approval to market one or more of its product candidates in the U.S., Mast may never receive approval or commercialize its products outside of the U.S., which would limit Mast s ability to realize the full commercial potential of its product candidates.

In order to market any products outside of the U.S., Mast must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy. Approval procedures vary among countries and can involve additional product testing and validation and additional administrative review periods. The time required to obtain approval in other countries might differ from that required to obtain FDA approval. The regulatory approval process in other countries may include all of the risks detailed above regarding FDA approval in the U.S., as well as other risks. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. Failure to obtain regulatory approval in other countries or any delay or setback in obtaining such approval could have the same adverse effects detailed above regarding FDA approval in the U.S. As described above, such effects include the risks that Mast s product candidates may not be approved for all indications requested, which could limit the uses of Mast s product candidates and have an adverse effect on product sales, and that such approval may be subject to limitations on the indicated uses for which the product may be marketed or require costly, post-marketing follow-up studies.

Risks Related to Mast s Intellectual Property

Mast s success will depend in part on obtaining and maintaining effective patent and other intellectual property protection for Mast s product candidates and proprietary technology.

Mast s success will depend in part on its ability to:

obtain and maintain patent and other exclusivity with respect to Mast s products and their use;

prevent third parties from infringing upon Mast s proprietary rights;

maintain proprietary know-how and trade secrets;

operate without infringing upon the patents and proprietary rights of others; and

obtain appropriate licenses to patents or proprietary rights held by third parties if infringement would otherwise occur or if necessary to secure exclusive rights to them, both in the U.S. and in foreign countries.

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The patent and intellectual property positions of biopharmaceutical companies generally are highly uncertain, involve complex legal and factual questions, and have been and continue to be the subject of much litigation. There is no guarantee that Mast has or will develop or obtain the rights to products or processes that are patentable, that patents will issue from any pending applications or that claims allowed will be sufficient to protect the technology Mast develops or has developed or that is used by Mast, Mast s CMOs or its other service providers. In addition, any patents that are issued to Mast may be limited in scope or challenged, invalidated, infringed or circumvented, including by Mast s competitors, and rights Mast have under issued patents may not provide competitive advantages to Mast. If competitors can develop and commercialize technology and products similar to ours, Mast s ability to successfully commercialize Mast s technology and products may be impaired.

Patent applications in the U.S. are confidential for a period of time until they are published, and publication of discoveries in scientific or patent literature typically lags actual discoveries by several months. As a result, Mast cannot be certain that the inventors listed in any patent or patent application owned by Mast were the first to conceive of the inventions covered by such patents and patent applications (for U.S. patent applications filed before March 16, 2013), or that such inventors were the first to file patent applications for such inventions outside the United States and, after March 15, 2013, in the United States. In addition, changes in or different interpretations of patent laws in the United States and foreign countries may affect its patent rights and limit the number of patents Mast can obtain, which could permit others to use its discoveries or to develop and commercialize Mast s technology and products without any compensation to Mast.

Mast also relies on unpatented know-how and trade secrets and continuing technological innovation to develop and maintain its competitive position, which Mast seeks to protect, in part, through confidentiality agreements with employees, consultants, collaborators and others. Mast also has invention or patent assignment agreements with its employees and certain consultants. The steps Mast has taken to protect its proprietary rights, however, may not be adequate to preclude misappropriation of or otherwise protect Mast s proprietary information or prevent infringement of its intellectual property rights, and Mast may not have adequate remedies for any such misappropriation or infringement. In addition, it is possible that inventions relevant to its business could be developed by a person not bound by an invention assignment agreement with Mast or independently discovered by a competitor.

Mast also intends to rely on regulatory exclusivity for protection of its product candidates, if approved for commercial sale. Implementation and enforcement of regulatory exclusivity, which may consist of regulatory data protection and market protection, varies widely from country to country. Failure to qualify for regulatory exclusivity, or failure to obtain or maintain the extent or duration of such protections that Mast expects for its product candidates, if approved, could affect Mast s decision on whether to market the products in a particular country or countries or could otherwise have an adverse impact on its revenue or results of operations. For AIR001, which is administered via nebulization, Mast may rely on regulatory exclusivity for the combination of AIR001 and its delivery system. Other medications that alter pulmonary pressures include the delivery device in their U.S. and European market labels, and are approved for use only with the specified proprietary delivery device. However, there is no assurance that Mast s AIR001 product and its delivery system, if approved, will benefit from this type of market protection.

Mast may rely on trademarks, trade names and brand names to distinguish its products, if approved for commercial sale, from the products of its competitors. However, Mast s trademark applications may not be approved. Third parties may also oppose Mast s trademark applications or otherwise challenge its use of the trademarks in which case Mast may expend substantial resources to defend its trademarks and may enter into agreements with third parties that may limit Mast s use of its trademarks. In the event that its trademarks are successfully challenged, Mast could be forced to rebrand its product, which could result in loss of brand recognition and could require Mast to devote significant resources to advertising and marketing these new brands. Further, Mast s competitors may infringe its trademarks or Mast may not have adequate resources to enforce its trademarks.

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Mast s success depends in large part on its ability to prevent competitors from duplicating or developing and commercializing equivalent versions of Mast s product candidates, but patent protection may be difficult to obtain and any issued claims may be limited.

The potential use and therapeutic benefits of inorganic nitrite, such as sodium nitrite (the API in AIR001) have been known for decades. There is substantial prior art describing the uses of inorganic nitrite in a wide range of diseases and conditions. As a result, Mast s ability to find novel and non-obvious uses of AIR001 is uncertain. Further, a patent examiner may combine numerous, disparate references in order to reject a claimed composition, formulation and/or use for obviousness. If the prior art suggests, even implicitly, the desirability of combining previously known elements, such as the use of AIR001 in a particular indication, the subsequent use of AIR001 in that indication may be unpatentable.

Mast has filed for patent protection in the U.S. and other countries to cover various methods of therapeutic use of its product candidates, including the use of inhaled inorganic nitrite for treating HFpEF. However, Mast s pending patent applications may not issue as patents, and any issued patents may not provide Mast with significant competitive advantages, because the validity or enforceability of any of those patents may be challenged and, if instituted, one or more of the challenges may be successful. Patents may be challenged in the U.S. under post-grant review proceedings, *inter partes* reexamination, *ex parte* re-examination, or challenges in district court. Any patents issued in foreign jurisdictions may be subjected to comparable proceedings lodged in various foreign patent offices. These proceedings could result in either loss of the patent or loss or reduction in the scope of one or more of the claims of the patent. Even if a patent issues, and is held valid and enforceable, competitors may be able to design around Mast s patents, such as by using pre-existing or newly developed technology, in which case competitors may not infringe Mast s issued claims and may be able to market and sell products that compete directly with ours before Mast s patents expire. In addition, Mast s pending patent applications to cover use of AIR001 for treating HFpEF are jointly owned with an independent research and educational institution and until and unless Mast obtains an exclusive license to that co-owner s rights, it may license its rights to another third-party, which could negatively affect the value of its product candidate.

The patent prosecution process is expensive and time-consuming. Mast and any future licensors and licensees may not apply for or prosecute patents on certain aspects of Mast s product candidates at a reasonable cost, in a timely fashion, or at all. Mast may not have the right to control the preparation, filing and prosecution of some patent applications related to its product candidates or technologies. As a result, these patents and patent applications may not be prosecuted and enforced in a manner consistent with the best interests of Mast. It is also possible that Mast or any future licensors or licensees will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Further, it is possible that defects of form in the preparation or filing of Mast s patent applications may exist, or may arise in the future, such as with respect to proper priority claims, inventorship, assignment, or claim scope. If there are material defects in the form or preparation of its patents or patent applications, such patents or applications may be invalid or unenforceable. In addition, one or more parties may independently develop similar technologies or methods, duplicate Mast s technologies or methods, or design around the patented aspects of Mast s products, technologies or methods. Any of these circumstances could impair Mast s ability to protect its products, if approved, in ways which may have an adverse impact on its business, financial condition and operating results.

Furthermore, the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and Mast s owned and licensed patents may be challenged in the courts or patent offices in and outside of the United States. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit its ability to stop others from using or commercializing similar or identical products or technology, or limit the duration of the patent protection of Mast s

technology and drugs. Given the amount of time required for the development, testing and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, Mast s owned and licensed patent portfolio may not provide Mast with sufficient rights to exclude others from commercializing drugs similar or identical to ours.

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Enforcement of intellectual property rights in countries outside the U.S., including China in particular, has been limited or non-existent. Future enforcement of patents and proprietary rights in many other countries will likely be problematic or unpredictable. Moreover, the issuance of a patent in one country does not assure the issuance of a similar patent in another country. Claim interpretation and infringement laws vary by nation, so the extent of any patent protection is uncertain and may vary in different jurisdictions.

Obtaining and maintaining Mast s patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and Mast s patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and applications are required to be paid to the U.S. Patent and Trademark Office, or USPTO, and various governmental patent agencies outside of the U.S. in several stages over the lifetime of the patents and applications. The USPTO and various non-U.S. governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process and after a patent has issued. There are situations in which non-compliance can result in decreased patent term adjustment or in abandonment or lapse of the patent or patent application, leading to partial or complete loss of patent rights in the relevant jurisdiction.

Third parties may claim that Mast s products, if approved, infringe on their proprietary rights and may challenge the approved use or uses of a product or Mast s patents rights through litigation or administrative proceedings, and defending such actions may be costly and time consuming, divert management attention away from Mast s business, and result in an unfavorable outcome that could have an adverse effect on its business.

Mast s commercial success depends on its ability and the ability of its CMOs and component suppliers to develop, manufacture, market and sell Mast s products and product candidates and use its proprietary technologies without infringing the proprietary rights of third parties. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which Mast is or may be developing products. As the industries in which Mast operates (biopharmaceutical, specialty pharmaceutical, biotechnology and pharmaceutical) expand and more patents are issued, the risk increases that Mast will be subject to claims that its products or product candidates, or their use or manufacture, infringe the rights of others. Because patent applications can take many years to publish and issue, there currently may be pending applications, unknown to Mast, that may later result in issued patents that Mast s products, product candidates or technologies infringe, or that the process of manufacturing its products or any of their respective component materials, or the component materials themselves, infringe, or that the use of Mast s products, product candidates or technologies infringe.

Mast or its CMOs or component material suppliers may be exposed to, or threatened with, litigation by third parties alleging that Mast s products, product candidates and/or technologies infringe their patents and/or other intellectual property rights, or that one or more of the processes for manufacturing its products or any of their respective component materials, or the component materials themselves, or the use of Mast s products, product candidates or technologies, infringe their patents and/or other intellectual property rights. If a third-party patent or other intellectual property right is found to cover Mast s products, product candidates, technologies or their uses, or any of the underlying manufacturing processes or components, Mast could be required to pay damages and could be unable to commercialize its products or use its technologies or methods unless Mast is able to obtain a license to the patent or intellectual property right. A license may not be available to Mast in a timely manner or on acceptable terms, or at all. In addition, during litigation, the third-party alleging infringement could obtain a preliminary injunction or other equitable remedy that could prohibit Mast from making, using, selling or importing its products, technologies or methods.

There generally is a substantial amount of litigation involving patent and other intellectual property rights in the industries in which Mast operate and the cost of such litigation may be considerable. Mast can provide no

assurance that its product candidates or technologies will not infringe patents or rights owned by others, licenses to which might not be available to Mast in a timely manner or on acceptable terms, or at all. If a third party claims that Mast or Mast s CMOs or component material suppliers infringe its intellectual property rights, Mast may face a number of issues, including, but not limited to:

- infringement and other intellectual property claims which, with or without merit, may be expensive and time consuming to litigate and may divert Mast s management s time and attention from its core business;
- substantial damages for infringement, including the potential for treble damages and attorneys fees, which Mast may have to pay if it is determined that the product and/or its use at issue infringes or violates the third party s rights;
- a court prohibiting Mast from selling or licensing the product unless the third-party licenses its intellectual property rights to Mast, which it may not be required to do;
- if a license is available from the third party, Mast may have to pay substantial royalties, fees and/or grant cross-licenses to the third party; and
- redesigning Mast s products or processes so they do not infringe, which may not be possible or may require substantial expense and time.

No assurance can be given that patents do not exist, have not been filed, or could not be filed or issued, which contain claims covering Mast s products, product candidates or technology or those of Mast s CMOs or component material suppliers or the use of its products, product candidates or technologies. Because of the large number of patents issued and patent applications filed in the industries in which Mast operates, there is a risk that third parties may allege they have patent rights encompassing Mast s products, product candidates or technologies, or those of Mast s CMOs or component material suppliers, or uses of its products, product candidates or technologies. With regard to AIR001, Mast is aware of issued patents and pending patent applications with claims related to compositions of sodium nitrite and therapeutic uses of sodium nitrite and/or inorganic nitrite. Mast does not believe that use of inhaled AIR001 to treat HFpEF, if approved, would infringe on issued patents. However, if AIR001 is approved for commercial sale, the third-party owners of patents issued currently or in the future may allege that Mast s product infringes on their patents, in which case Mast may become involved in costly and time consuming litigation and/or administrative proceedings to defend the manufacture and/or use of its product, or Mast may agree to pay substantial amounts to obtain licenses from such parties, which could negatively affect Mast s business prospects, operating results and financial condition.

In the future, it may be necessary for Mast to enforce its proprietary rights, or to determine the scope, validity and unenforceability of other parties proprietary rights, through litigation or other dispute proceedings, which may be costly, and to the extent Mast is unsuccessful, adversely affect its rights. In these proceedings, a court or administrative body could determine that Mast s claims, including those related to enforcing patent rights, are not valid or that an alleged infringer has not infringed its rights. The uncertainty resulting from the mere institution and continuation of any patent- or other proprietary rights-related litigation or interference proceeding could have a material and adverse effect on Mast s business prospects, operating results and financial condition.

Risks Related to Mast s Industry

Mast expects intense competition in the marketplace for Mast s product candidates, should any of them receive regulatory approval.

The industries in which Mast operates (biopharmaceutical, specialty pharmaceutical, biotechnology and pharmaceutical) are highly competitive and subject to rapid and significant change. Mast is aware of many other organizations developing drug products and other therapies intended to treat or cure the diseases or conditions in which Mast is developing or plan to develop its product candidates. Developments by others may render potential

application of any of Mast s product candidates in a particular indication obsolete or noncompetitive, even prior to completion of its development and approval for that indication. If successfully developed and approved, Mast expects its product candidates will face intense competition. Mast may not be able to compete successfully against organizations with competitive products, particularly large pharmaceutical companies. Many of Mast s potential competitors have significantly greater financial, technical and human resources than Mast does, and may be better equipped to develop, manufacture, market and distribute products. Many of these companies operate large, well-funded research, development and commercialization programs, have extensive experience in nonclinical and clinical studies, obtaining FDA and other regulatory approvals and manufacturing and marketing products, and have multiple products that have been approved or are in late-stage development. Smaller companies may also prove to be significant competitors, particularly through collaborative arrangements with large pharmaceutical and biotechnology companies. Furthermore, heightened awareness on the part of academic institutions, government agencies and other public and private research organizations of the potential commercial value of their inventions have led them to actively seek to commercialize the technologies they develop, which increases competition for investment in Mast s programs. Competitive products may be more effective, or more effectively marketed and sold, than ours, which would have a material adverse effect on Mast s ability to generate revenue.

Mast is subject to uncertainty relating to healthcare reform measures and reimbursement policies that, if not favorable to Mast s products, could hinder or prevent its products commercial success, if any of Mast s product candidates are approved.

The unavailability or inadequacy of third-party payer coverage and reimbursement could negatively affect the market acceptance of its product candidates and the future revenues Mast may expect to receive from those products. The commercial success of Mast s product candidates, if approved, will depend in part on the extent to which the costs of such products will be covered by third-party payers, such as government health programs, commercial insurance and other organizations. These third-party payers are increasingly challenging the prices and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. If these third-party payers do not consider Mast s products to be cost-effective compared to other therapies, they may not cover its products after approval as a benefit under their plans or, even if they do, the level of payment may not be sufficient to allow Mast to sell its products on a profitable basis. In the case of products administered in an inpatient hospital setting, a level of payment that is inadequate to cover the cost to hospitals of providing and administering Mast s products to patients, could delay market acceptance of or limit its ability to penetrate the markets for its products.

Significant uncertainty exists as to the reimbursement status for newly approved drug products, including coding, coverage and payment. There is no uniform policy requirement for coverage and reimbursement for drug products among third-party payers in the United States, therefore coverage and reimbursement for drug products can differ significantly from payer to payer. The coverage determination process is often a time-consuming and costly process that will require Mast to provide scientific and clinical support for the use of its products to each payer separately, with no assurance that coverage and adequate payment will be applied consistently or obtained. The process for determining whether a payer will cover and how much it will reimburse a product may be separate from the process of seeking approval of the product or for setting the price of the product. Even if reimbursement is provided, market acceptance of its products may be adversely affected if the amount of payment for Mast s products proves to be unprofitable for healthcare providers or less profitable than alternative treatments or if administrative burdens make Mast s products less desirable to use. Third-party payer reimbursement to providers of Mast s products, if approved, may be subject to a bundled payment that also includes the procedure of administering Mast s products. To the extent there is no separate payment for Mast s product(s), there may be further uncertainty as to the adequacy of reimbursement amounts.

The continuing efforts of the government, private insurance companies, and other organizations to contain or reduce costs of healthcare may adversely affect:

Mast s ability to set an appropriate price for its products;

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the rate and scope of adoption of Mast s products by healthcare providers;

Mast s ability to generate revenue or achieve or maintain profitability;

the future revenue and profitability of Mast s potential customers, suppliers and collaborators; and

Mast s access to additional capital.

Mast s ability to successfully commercialize its products will depend in part on the extent to which governmental authorities, private health insurers and other organizations establish what Mast believes are appropriate coverage and reimbursement for its products. The containment of healthcare costs has become a priority of federal and state governments and the prices of drug products have been a focus in this effort. For example, there have been several recent U.S. Congressional inquiries and proposed bills designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. Mast expects that federal, state and local governments in the U.S. will continue to consider legislation directed at lowering the total cost of healthcare. In addition, in certain foreign markets, the pricing of drug products is subject to government control and reimbursement may in some cases be unavailable or insufficient. It is uncertain whether and how future legislation, whether domestic or abroad, could affect prospects for its product candidates or what actions federal, state, or private payers for healthcare treatment and services may take in response to any such healthcare reform proposals or legislation. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures reforms may prevent or limit its ability to generate revenue, attain profitability or commercialize Mast s product candidates.

Mast faces potential product liability exposure and, if successful claims are brought against it, Mast may incur substantial liability for a product or product candidate and may have to limit its commercialization. In the future, Mast anticipates that it will need to obtain additional or increased product liability insurance coverage and it is uncertain whether such increased or additional insurance coverage can be obtained on commercially reasonable terms, if at all.

Mast s business (in particular, the use of Mast s product candidates in clinical studies and the sale of any products for which Mast obtain marketing approval) will expose Mast to product liability risks. Product liability claims might be brought against Mast by patients, healthcare providers, pharmaceutical companies or others selling Mast s products. If Mast cannot successfully defend itself against any such claims, Mast will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

decreased demand for Mast s products and loss of revenue;

impairment of Mast s business reputation;

delays in enrolling patients to participate in Mast s clinical studies;

withdrawal of clinical study participants;

a clinical hold, suspension or termination of a clinical study or amendments to a study design;

significant costs of related litigation;

substantial monetary awards to patients or other claimants; and

the inability to commercialize Mast s products and product candidates.

Mast maintains limited product liability insurance for its clinical studies, but its insurance coverage may not reimburse Mast or may not be sufficient to reimburse Mast for all expenses or losses it may suffer. Moreover, insurance coverage is becoming increasingly expensive and, in the future, Mast may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect it against losses.

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Mast expects that it will expand its insurance coverage to include the sale of commercial products if Mast obtains marketing approval of any of its product candidates, but Mast may be unable to obtain product liability insurance on commercially acceptable terms or may not be able to maintain such insurance at a reasonable cost or in sufficient amounts to protect Mast against potential losses. Large judgments have been awarded in class action lawsuits based on drug products that had unanticipated side effects. A successful product liability claim or series of claims brought against Mast could cause its stock price to fall and, if judgments exceed Mast s insurance coverage, could decrease Mast s cash and adversely affect Mast s business.

Risks Related to Mast s Common Stock

If Mast is unable to maintain compliance with NYSE MKT continued listing standards and policies, the NYSE MKT may commence proceedings to delist Mast s common stock, and in some cases, determine to suspend trading in Mast s common stock immediately without an opportunity to propose a plan that could enable Mast to regain compliance, which would likely cause the liquidity and market price of its common stock to decline and you could lose your investment.

Mast s common stock is listed on the NYSE MKT (NYSE MKT or the Exchange). The NYSE MKT retains substantial discretion to, at any time and without notice, suspend dealings in or remove from any security from listing. The NYSE MKT has adopted continued listing standards related to an issuer s financial condition, operating results, disposal of assets, reduction in operations, compliance with listing agreements and SEC requirements, and the extent of public distribution and market value of the issuer s listed security, and the Exchange will consider suspending dealings in, or delisting, securities of an issuer that does not meet those standards. For example, the NYSE MKT will consider suspending dealings in, or delisting, securities of an issuer that has stockholders equity of less than $6 million if that issuer has sustained losses from continuing operations and/or net losses in its five most recent fiscal years. Mast has had a loss from operations and net loss in each of its five most recent fiscal years and Mast expects to incur a loss from operations and net loss for 2016. As of September 30, 2016, Mast s stockholders equity was $13.2 million. If Mast s stockholders equity falls below $6 million, the Exchange may determine that Mast is no longer suitable for listing and may commence delisting proceedings pursuant Section 1003(a)(iii) of the NYSE MKT Company Guide.

The NYSE MKT will also normally consider suspending dealings in, or removing from the list, a common stock selling for a substantial period of time at a low price per share if the issuer fails to effect a reverse split of the stock within a reasonable time after being notified that the Exchange deems such action to be appropriate under the circumstances. Mast understands NYSE MKT policy to be that, if the 30-day average closing price of an issuer s common stock is less than $0.20 per share, the Exchange will alert the issuer to the fact that it may have a low selling price deficiency if, in six months, the 30-day average closing price of the issuer s common stock is still, or again, less than $0.20 per share. If, in six months, the 30-day average closing price of the issuer s common stock is in fact less than $0.20 per share, the issuer should expect to receive a deficiency letter from the Exchange notifying the issuer that it is below the continued listing criteria set forth in Section 1003(f)(v) of the NYSE MKT Company Guide and the issuer would have to submit a plan to the Exchange to regain compliance with its listing standards, have that plan accepted by the Exchange, and subsequently perform against that plan, otherwise the Exchange would commence delisting proceedings. The market price for Mast s common stock historically has been highly volatile, and Mast expects it will continue to be highly volatile in the foreseeable future. If the 30-day average closing price of Mast s common stock falls below $0.20 per share, Mast may, in six months from that time, be considered by the Exchange to be out of compliance with Section 1003(f)(v) of the NYSE MKT Company Guide and the Exchange may require Mast to effect a reverse split of its common stock within a reasonable time to regain compliance or otherwise commence delisting proceedings.

In addition, Mast is aware of a NYSE MKT policy that, if an issuer s common stock trades below $0.06 per share, the staff of the Exchange will determine that issuer s stock is no longer suitable for listing on the NYSE MKT and will halt trading in and commence proceedings to delist that stock from the Exchange immediately. The issuer may appeal the delisting, but the issuer s stock will continue to be suspended from trading on the Exchange during the appeal process and the appeal may be unsuccessful.

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There is no assurance that Mast will be able to maintain compliance with NYSE MKT continued listing standards and/or policies. The delisting of its common stock from the NYSE MKT likely would reduce the trading volume and liquidity in Mast s common stock, may lead to decreases in the trading price of Mast s common stock, and may also materially impair Mast s stockholders ability to buy and sell shares. In addition, the delisting of its common stock could significantly impair its ability to raise additional capital, which may be necessary for to execute on Mast s business strategy.

If Mast s common stock were delisted and determined to be a penny stock, a broker-dealer may find it more difficult to trade Mast s common stock and an investor may find it more difficult to acquire or dispose of Mast s common stock in the secondary market.

If Mast s common stock was removed from listing with the NYSE MKT, it may be subject to the so-called penny stock rules. The SEC has adopted regulations that define a penny stock to be any equity security that has a market price per share of less than $5.00, subject to certain exceptions, such as any securities listed on a national securities exchange. For any transaction involving a penny stock, unless exempt, the rules impose additional sales practice requirements on broker-dealers, subject to certain exceptions. If Mast s common stock were delisted and determined to be a penny stock, a broker-dealer may find it more difficult to trade Mast s common stock and an investor may find it more difficult to acquire or dispose of Mast s common stock on the secondary market.

The market price of Mast s common stock historically has been and likely will continue to be highly volatile.

The market price for Mast s common stock historically has been highly volatile, and the market for its common stock has from time to time experienced significant price and volume fluctuations, based both on Mast s operating performance and for reasons that appear to Mast unrelated to its operating performance. For instance, based on closing prices, the market price for its common stock dropped approximately 45% following Mast s announcement of an underwritten public offering of equity securities on February 9, 2016, and it dropped approximately 80% following Mast s announcement of top-line results of Mast s Phase 3 clinical study of vepoloxamer in sickle cell disease on September 20, 2016. Conversely, the market price for Mast s common stock increased by more than 55% during one trading day in January 2014, in the absence of any news release by Mast or rumors of which Mast was aware. The market price of its common stock may fluctuate significantly in response to a number of factors, including:

- the level of Mast s financial resources;
- announcements of entry into or consummation of a financing or strategic transaction;
- results from a clinical study of a product candidate;
- delays in the completion of Mast s clinical studies or termination of a clinical study, including due to difficulties with patient enrollment or safety issues or inability to produce sufficient quantities of clinical trial material;
- FDA or international regulatory actions and regulatory developments in the U.S. and foreign countries;

announcements of new products or technologies, commercial relationships or other events (including clinical study results and regulatory events and actions) by Mast or its competitors;

announcements of difficulties or delays in commercial manufacture or supply of Mast s drug products;

market conditions in the pharmaceutical, biopharmaceutical, specialty pharmaceutical and biotechnology sectors;

developments concerning intellectual property rights generally or those of Mast or Mast s competitors;

changes in securities analysts estimates of Mast s financial performance or deviations in Mast s business and the trading price of its common stock from the estimates of securities analysts;

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events affecting any future collaborations, commercial agreements and grants;

fluctuations in stock market prices and trading volumes of similar companies;

sales of large blocks of its common stock, including sales by significant stockholders, Mast s executive officers or directors or pursuant to shelf or resale registration statements that register shares of Mast s common stock that may be sold by Mast or certain of its current or future stockholders;

discussion of Mast or its stock price by the financial and scientific press and in online investor communities;

commencement of delisting proceedings by the NYSE MKT;

additions or departures of key personnel; and

changes in third-party payer coverage or reimbursement policies.

As evidenced by the September 2016 decline, the realization of any of the foregoing could have a dramatic and adverse impact on the market price of Mast s common stock. In addition, class action litigation has often been instituted against companies whose securities have experienced a substantial decline in market price. Moreover, regulatory entities often undertake investigations of investor transactions in securities that experience volatility following an announcement of a significant event or condition. Any such litigation brought against Mast or any such investigation involving its investors could result in substantial costs and a diversion of management s attention and resources, which could harm Mast s business, operating results and financial condition.

Mast s stock price could decline significantly based on progress with and results of its clinical studies and regulatory agency decisions affecting development of its product candidates.

Mast expects announcements of progress with and results of clinical studies of its product candidates and regulatory decisions (by Mast, the FDA, or another regulatory agency) to affect Mast s stock price. Stock prices of companies in its industry have declined significantly when such results and decisions were unfavorable or perceived to be negative or discouraging or when a product candidate did not otherwise meet expectations, and, as discussed above, the price of Mast s common stock dropped significantly following its September 20, 2016 announcement that Mast s Phase 3 clinical study of vepoloxamer in sickle cell disease did not meet the primary efficacy endpoint. If progress in clinical studies or study results are not viewed favorably by Mast or third parties, including investors, analysts, potential collaborators, the academic and medical communities and regulators, its stock price could decline significantly and you could lose your investment in Mast s common stock.

Mast may report top-line or interim clinical and nonclinical study data from time to time, which is based on preliminary analysis of then-available data. Such preliminary findings and conclusions are subject to change following a more comprehensive review of the study data and, in the case of interim data, completion of the study. In addition, results of clinical and nonclinical studies often are subject to different interpretations. Mast may interpret or weigh the importance of study data differently than third parties, including those noted above. Others may not accept or agree

with its analysis of study data, which could impact the approvability of Mast s product candidates and/or the value of Mast s development programs and company in general.

Sales of substantial amounts of Mast s common stock or the perception that such sales may occur could cause the market price of its common stock to decline significantly, even if Mast s business is performing well.

The market price of Mast s common stock could decline as a result of sales by, or the perceived possibility of sales by, Mast or its existing stockholders of shares of Mast s common stock. Sales by Mast s existing stockholders might also make it more difficult for Mast to sell equity securities at a time and price that Mast deems appropriate. Under Mast s existing ATM program, as of December 31, 2016, Mast may sell up to approximately $18 million of additional shares of Mast s common stock. The shelf registration statement on

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Form S-3 under which the ATM program is registered may be used to register the sale and issuance of more than $99 million of additional securities, subject to limitations if Mast s public float is less than $75 million described above. In addition, as of February 2, 2017, Mast has outstanding warrants to purchase approximately 80.7 million additional shares of its common stock. All of those warrants have an exercise price of less than $1.00 per share; however, based on the closing price of Mast s common stock on February 2, 2017, no outstanding warrants are in-the-money. Collectively, the ATM program, the shelf registration statement and any in-the-money warrants, may increase the likelihood of sales of substantial amounts of Mast s shares, or the perception that substantial sales may occur, by Mast or its existing securityholders from time to time, which could cause the market price of Mast s common stock to decline significantly.

Anti-takeover provisions in Mast s charter documents and under Delaware law may make an acquisition of Mast, which may be beneficial to its stockholders, more difficult, which could depress Mast s stock price.

Mast is incorporated in Delaware. Certain anti-takeover provisions of Delaware law and Mast s charter documents as currently in effect may make a change in control of Mast s company more difficult, even if a change in control would be beneficial to Mast s stockholders. Mast s bylaws limit who may call a special meeting of stockholders and establish advance notice requirements for nomination of individuals for election to its board of directors or for proposing matters that can be acted upon at stockholders meetings. Delaware law also prohibits corporations from engaging in a business combination with any holders of 15% or more of their capital stock until the holder has held the stock for three years unless, among other possibilities, the board of directors approves the transaction. The Mast Board may use these provisions to prevent changes in the management and control of Mast. Also, under applicable Delaware law, Mast s board of directors may adopt additional anti-takeover measures in the future. In addition, provisions of certain compensatory contracts with its management, such as equity award agreements, may have an anti-takeover effect by resulting in accelerated vesting of outstanding equity securities held by Mast s executive officers.

Because Mast does not expect to pay dividends with respect to Mast s common stock in the foreseeable future, you must rely on stock appreciation for any return on your investment.

Mast has paid no cash dividends on any of its common stock to date, and Mast currently intends to retain its future earnings, if any, to fund the development and growth of its business. As a result, with respect to its common stock, Mast does not expect to pay any cash dividends in the foreseeable future, and payment of cash dividends, if any, will also depend on Mast s financial condition, results of operations, capital requirements and other factors and will be at the discretion of Mast s board of directors. Furthermore, Mast is subject to various laws and regulations that may restrict its ability to pay dividends and Mast may in the future become subject to contractual restrictions on, or prohibitions against, the payment of dividends. Currently, Mast s debt facility with Hercules prohibits Mast from declaring and paying any cash dividend on any class of stock or other equity interest. Due to Mast s intent to retain any future earnings rather than pay cash dividends on its common stock and applicable laws, regulations and contractual obligations that may restrict its ability to pay dividends on its common stock, the success of your investment in Mast s common stock will likely depend entirely upon any future appreciation and Mast s common stock may not appreciate.

If Mast were to issue shares of its common stock or preferred stock that are available for issuance, Mast s stock price could decline.

Mast has 500,000,000 shares of authorized common stock and, as of February 2, 2017, approximately 115 million of such authorized shares were not outstanding or reserved for issuance under outstanding warrants, options, equity incentive plans or other rights. Subject to applicable securities laws and stock exchange listing requirements, the Mast Board is authorized under its charter documents to sell and issue Mast s authorized, but unissued, common stock without stockholder approval and may do so to satisfy Mast s capital requirements or finance the expansion of Mast s

product pipeline. The Mast Board also is authorized to issue and sell up to 1,000,000 shares of preferred stock without stockholder approval, at a purchase price approved by the board. The

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preferred stock may have rights that are superior to the rights of the holders of its common stock. The sale or the proposed sale of substantial amounts of Mast s common stock, preferred stock and/or securities convertible into shares of Mast s common or preferred stock in the public markets may adversely affect the market price of Mast s common stock. Mast s stockholders may also experience substantial dilution.

Risks Related to Savara

Risks Related to Savara s Capital Requirements and Financial Condition

Savara has a limited operating history and has incurred significant losses since inception, and expects that it will continue to incur losses for the foreseeable future, which makes it difficult to assess Savara s future viability.

Savara is a clinical development-stage biopharmaceutical company with a limited operating history upon which to evaluate its business and prospects. Savara has not been profitable since it commenced operations in 2008, and may not achieve profitability. In addition, Savara has limited history as an organization and has not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biopharmaceutical industry. Drug development is a highly speculative undertaking and involves a substantial degree of risk. To date, Savara has not obtained any regulatory approvals for any of its product candidates, commercialized any of its product candidates or generated any product revenue. Savara has devoted significant resources to research and development and other expenses related to its ongoing clinical trials and operations, in addition to acquiring product candidates.

For the year ended December 31, 2015 and the nine months ended September 30, 2016, Savara incurred losses from operations of $5.9 million and $6.9 million, respectively, and net cash used in operating activities was $4.8 million and $6.2 million, respectively. At September 30, 2016, Savara had an accumulated deficit of $34.4 million, its cash, cash equivalents and investment securities were $15.5 million, and its working capital was $14.6 million. Savara expects to continue to incur substantial operating losses for the next several years as it advances its product candidates through clinical development, global regulatory approvals, and commercialization. No revenue from operations will likely be available until, and unless, one of its product candidates is approved by the FDA or another regulatory agency and successfully marketed, or Savara enters into an arrangement that provides for licensing revenue or other partnering-related funding, outcomes which Savara may not achieve.

Savara will require substantial additional financing to obtain regulatory approval for AeroVanc and Molgradex, and a failure to obtain this necessary capital when needed on acceptable terms, or at all, could force Savara to delay, limit, reduce or terminate Savara s product development efforts or other operations.

Since inception, most of Savara s resources have been dedicated to the development and acquisition of its product candidates, AeroVanc and Molgradex. Savara believes that its existing capital resources will be sufficient to fund its operations for up to 12 months. Savara may raise additional capital from its existing investors prior to the closing of the Merger and may raise additional capital from new investors following the closing of the Merger. Savara will require significant additional capital to continue operations and execute on its current business strategy to develop AeroVanc and Molgradex through to regulatory approval. Savara cannot estimate with reasonable certainty the actual amounts necessary to successfully complete the development and commercialization of its product candidates and there is no certainty that Savara will be able to raise the necessary capital on reasonable terms or at all.

Savara s capital requirements for the foreseeable future will depend in large part on, and could increase significantly as a result of, its expenditures on its development programs. Future expenditures on its development programs are subject to many uncertainties, and will depend on, and could increase significantly as a result of, many factors,

including:

the number, size, complexity, results and timing of its drug development programs;

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the timing and terms of any collaborative or other strategic arrangement that Savara may establish;

the number of clinical and nonclinical studies necessary to demonstrate acceptable evidence of the safety and efficacy of its product candidates;

changes in standards of care which could increase the size and complexity of clinical studies;

the number of patients who participate, the rate of enrollment, and the ratio of randomized to evaluable patients in each clinical study;

the ability to locate patients to participate in a study given the limited number of patients available for orphan or ultra-orphan indications;

the number and location of sites and the rate of site initiation in each study;

the duration of patient treatment and follow-up;

the potential for additional safety monitoring or other post-marketing studies that may be requested by regulatory agencies;

the time and cost to manufacture clinical trial material and commercial product, including process development and scale-up activities, and to conduct stability studies, which can last several years;

the degree of difficulty and cost involved in securing alternate manufacturers or suppliers of drug product, components or delivery devices, as necessary to meet FDA requirements and/or commercial demand;

the costs, requirements, timing of, and the ability to, secure regulatory approvals;

the extent to which Savara increases its workforce and the costs involved in recruiting, training and incentivizing new employees;

the costs related to developing, acquiring and/or contracting for sales, marketing and distribution capabilities, supply chain management capabilities, and regulatory compliance capabilities, if Savara obtains regulatory approval for a product candidate and commercializes it without a partner;

the costs involved in evaluating competing technologies and market developments or the loss in sales in case of such competition; and

the costs involved in establishing, enforcing or defending patent claims and other proprietary rights.

Additional capital may not be available when Savara needs it, on terms that are acceptable to it or at all. If adequate funds are not available to Savara on a timely basis, it will be required to delay, limit, reduce or terminate its establishment of sales and marketing, manufacturing or distribution capabilities, development activities or other activities that may be necessary to commercialize its product candidates, conduct preclinical or clinical studies, or other development activities.

If Savara raises additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, it may have to relinquish certain valuable rights to its product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable. If Savara raises additional capital through public or private equity offerings, the ownership interest of its stockholders will be diluted and the terms of any new equity securities may have preferential rights over its common stock. If Savara raises additional capital through debt financing, it may be subject to covenants limiting or restricting its ability to take specific actions, such as incurring additional debt or making capital expenditures, or subject to specified financial ratios, any of which could restrict its ability to develop and commercialize its product candidates or operate as a business.

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Risks Related to Savara s Business Strategy and Operations

Savara is substantially dependent upon the clinical, regulatory and commercial success of its two product candidates, AeroVanc and Molgradex. Clinical drug development involves a lengthy and expensive process with an uncertain outcome, results of earlier studies and trials may not be predictive of future trial results, and Savara s clinical trials may fail to adequately demonstrate to the satisfaction of regulatory authorities the safety and efficacy of its two product candidates.

The success of Savara s business is dependent on its ability to advance the clinical development of AeroVanc for the treatment of persistent methicillin-resistant *Staphylococcus aureus* (MRSA) infections in the lungs of cystic fibrosis patients and Molgradex for the treatment of patients with pulmonary alveolar proteinosis (PAP). The AeroVanc Phase 3 study is scheduled to start in the United States and Canada in Q3 2017 and the Molgradex Phase 2/3 clinical study (IMPALA) is ongoing in Europe and Japan. Savara expects to announce top-line results from the Phase 2/3 study of Molgradex in the first quarter of 2018.

Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. A failure of one or more of Savara s clinical trials can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of Savara s product candidates may not be predictive of the results of later-stage clinical trials. There is a high failure rate for drugs proceeding through clinical trials, and product candidates in later stages of clinical trials may fail to show the required safety and efficacy despite having progressed through preclinical studies and initial clinical trials. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier clinical trials, and Savara cannot be certain that it will not face similar setbacks. Even if Savara s clinical trials are completed, the results may not be sufficient to obtain regulatory approval for its product candidates.

Given the development nature of Savara s product candidates, Savara is subject to risks associated with initiating, completing and achieving positive outcomes from its current and future clinical trials, including:

- slow implementation, enrollment and completion of the clinical trials;
- inability to enroll enough patients in the clinical trials;
- low patient compliance and adherence to dosing and reporting requirements, for example incomplete reporting of patient reported outcomes in the clinical trials or missed doses;
- lack of safety and efficacy in the clinical trials;
- delays in manufacture of supplies for both drug and device components due to delays in formulation, process development, or manufacturing activities;

requirements for additional nonclinical or clinical studies based on changes to formulation and/or changes to regulatory requirements;

requirements for additional clinical studies based on inconclusive clinical results or changes in market, standard of care, and/or regulatory requirements;

If Savara successfully completes the necessary clinical trials for its product candidates, its success will be subject to the risks associated with obtaining regulatory approvals, product launch, and commercialization, including:

FDA rejection of Savara s NDA submissions for its product candidates;

regulatory rejection in the EU, Japan, and other markets;

delays during regulatory review and/or requirements for additional CMC, nonclinical, or clinical studies, resulting in increased costs and/or delays in marketing approval and subsequent commercialization of the product candidates in the United States and other markets;

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inability to consistently manufacture commercial supplies of drug and delivery devices resulting in slowed market development and lower revenue;

poor commercial sales due to:

the ability of Savara s future sales organization or its potential commercialization partners to effectively sell the product candidates;

Savara s lack of success in educating physicians and patients about the benefits, administration and use of its product candidates;

the availability, perceived advantages, relative cost, relative safety and relative efficacy of other products or treatments for the targeted indications of the product candidates;

low patient demand for the product candidates;

poor prescription coverage and inadequate reimbursement for its product candidates;

Savara s inability to enforce its intellectual property rights in and to its product candidates; and

reduction in the safety profile of its product candidates following approval.

Many of these clinical, regulatory and commercial matters are beyond Savara s control and are subject to other risks described elsewhere in this Risk Factors section. Accordingly, Savara cannot assure that it will be able to advance its product candidates further through final clinical development, or obtain regulatory approval of, commercialize or generate significant revenue from them. If Savara cannot do so, or are significantly delayed in doing so, its business will be materially harmed.

If Savara fails to attract and retain senior management and key scientific personnel, it may be unable to successfully develop and commercialize its product candidates.

Savara has historically operated with a limited number of employees that manage third-parties for most development activities. Institutional knowledge is concentrated within a small number of employees. Savara s success depends in part on its continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel. Savara s future success is highly dependent upon the contributions of its senior management, as well as its senior scientists and other members of its senior management team. The loss of services of any of these individuals, who all have at-will employment arrangements with Savara, could delay or prevent the successful development of its product pipeline, completion of its planned clinical trials or the commercialization of its product candidates.

Replacing key employees may be a difficult, costly and protracted process, and Savara may not have other personnel with the capacity to assume all the responsibilities of a key employee upon his/her departure. Transition periods can

be difficult to manage and may cause disruption to its business. In addition, there may be intense competition from other companies and organizations for qualified personnel. Other companies and organizations with which Savara competes for personnel may have greater financial and other resources and different risk profiles than Savara, and a history of successful development and commercialization of its product candidates. If Savara cannot attract and retain skilled personnel, as needed, Savara may not achieve its development and other goals.

In addition, the success of Savara s business will depend on its ability to develop and maintain relationships with respected service providers and industry-leading consultants and advisers. If Savara cannot develop and maintain such relationships, as needed, the rate and success at which Savara can develop and commercialize product candidates may be limited. In addition, its outsourcing strategy, which has included engaging consultants that spend considerable time in its office to manage key functional areas, may subject Savara to scrutiny under labor laws and regulations, which may divert management time and attention and have an adverse effect on its business and financial condition.

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Savara does not have, and does not have plans to establish manufacturing facilities. Savara completely relies on third parties for the manufacture and supply of its clinical trial drug and delivery device supplies and, if approved, commercial product materials. The loss of any of these vendors or a vendor s failure to provide Savara with an adequate supply of clinical trial or commercial product material in a timely manner and on commercially acceptable terms, or at all, could harm its business.

Savara outsources the manufacture of its product candidates and does not plan to establish its own manufacturing facilities. To manufacture Savara s product candidates, Savara has made numerous custom modifications at CMOs, making Savara highly dependent on these CMOs. For clinical and commercial supplies, if approved, Savara has supply agreements with third party CMOs for drug substance, finished drug product, drug delivery devices and other necessary components of its product candidates. While Savara has secured long-term commercial supply agreements with many of the third party CMOs, Savara would need to negotiate agreements for commercial supply with several important CMOs, and Savara may not be able to reach agreement on acceptable terms. In addition, Savara relies on these third parties to conduct or assist Savara in key manufacturing development activities, including qualification of equipment, developing and validating methods, defining critical process parameters, releasing component materials and conducting stability testing, among other things. If these third parties are unable to perform their tasks successfully in a timely manner, whether for technical, financial or other reasons, Savara may be unable to secure clinical trial material, or commercial supply material if approved, which likely would delay the initiation, conduct or completion of its clinical studies or prevent Savara from having enough commercial supply material for sale, which would have a material and adverse effect on its business.

All manufacturers of Savara s clinical trial material and, if approved, commercial product, including drug substance manufacturers, must comply with cGMP requirements enforced by the FDA through its facilities inspection program and applicable requirements of foreign regulatory authorities. These requirements include quality control, quality assurance and the maintenance of records and documentation. Manufacturers of Savara s clinical trial material may be unable to comply with these cGMP requirements and with other FDA, state and foreign regulatory requirements. While Savara or its representatives generally monitor and audit its manufacturers systems, Savara does not have full control over their ongoing compliance with these regulations. And while the responsibility to maintain cGMP compliance is shared between Savara and the third-party manufacturer, Savara bears ultimately responsibility for its supply chain and compliance with regulatory standards. Failure to comply with these requirements may result in fines and civil penalties, suspension of production, suspension or delay or failure to obtain product approval, product seizure or recall, or withdrawal of product approval.

Currently, Savara does not have alternative vendors to back up its primary vendors of clinical trial material or, if approved, commercial supply material. Identification of and discussions with other vendors may be protracted and/or unsuccessful, or these new vendors may be unsuccessful in producing the same results as the current primary vendors producing the material. Therefore, if its primary vendors become unable or unwilling to perform their required activities, Savara could experience protracted delays or interruptions in the supply of clinical trial material and, ultimately, product for commercial sale, which would materially and adversely affect its development programs, commercial activities, operating results and financial condition. In addition, the FDA or regulatory authorities outside of the United States may require that Savara have an alternate manufacturer of a drug product before approving it for marketing and sale in the United States or abroad and securing such alternate manufacturer before approval of an NDA could result in considerable additional time and cost prior to NDA approval.

Any new manufacturer or supplier of finished drug product or its component materials, including drug substance and delivery devices, would be required to qualify under applicable regulatory requirements and would need to have sufficient rights under applicable intellectual property laws to the method of manufacturing of such product or ingredients required by Savara. The FDA or foreign regulatory agency may require Savara to conduct additional

clinical studies, collect stability data and provide additional information concerning any new supplier,

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or change in a validated manufacturing process, including scaling-up production, before Savara could distribute products from that manufacturer or supplier or revised process. For example, if Savara were to engage a third party other than its current CMOs to supply the drug substance or drug product for future clinical trial, or commercial product, the FDA or regulatory authorities outside of the United States may require Savara to conduct additional clinical and nonclinical studies to ensure comparability of the drug substance or drug product manufactured by its current CMOs to that manufactured by the new supplier. Changing of suppliers or equipment is particularly challenging for companies like Savara, with inhalation products, because any change could alter the drug product of its performance. The manufacturing of the drug substance of Molgradex, molgramostim, a biological drug substance, as well as the drug product, Molgradex, is currently being transferred to a new manufacturing site. Producing a pharmaceutically and biologically similar product may prove to be challenging, and may take more time and resources that currently anticipated. The transfer of the manufacturing to the new site may also cause regulatory agencies, including the FDA, to require additional nonclinical or clinical studies, which may cause delay or failure to obtain regulatory approval, and incur substantial additional cost.

The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of pharmaceutical products often encounter difficulties in production, particularly in scaling-up initial production. These problems include difficulties with production costs and yields, quality control, including stability of the product candidate and quality assurance testing, and shortages of qualified personnel. Some of Savara s product candidates have not been manufactured at the scale Savara believes will be necessary to maximize its commercial value and, accordingly, Savara may encounter difficulties in attempting to scale-up production and may not succeed in that effort on a timely basis or at all. In addition, the FDA or other regulatory authorities may impose additional requirements as Savara scales-up initial production capabilities, which may delay its scale-up activities and/or add expense.

If Savara s manufacturers encounter any of the aforementioned difficulties or otherwise fail to comply with their contractual obligations or there are delays entering commercial supply agreements due to capital constraints, Savara may have insufficient quantities of material to support ongoing and/or planned clinical studies or to meet commercial demand, if approved. In addition, any delay or interruption in the supply of materials necessary or useful to manufacture its product candidates could delay the completion of its clinical studies, increase the costs associated with its development programs and, depending upon the period of delay, require Savara to commence new clinical studies at significant additional expense or terminate the studies completely. Delays or interruptions in the supply of commercial product could result in increased cost of goods sold and lost sales. Savara cannot provide assurance that manufacturing or quality control problems will not arise in connection with the manufacture of its clinical trial material or commercial product, if approved, or that third-party manufacturers will be able to maintain the necessary governmental licenses and approvals to continue manufacturing such clinical trial material or commercial product, as applicable. In addition, AeroVanc and Molgradex are currently manufactured entirely or partially outside the United States and, as a result, Savara may experience interruptions in supply due to shipping or customs difficulties or regional instability. Furthermore, changes in currency fluctuations, shipping costs, or import tariffs could adversely affect cost of goods sold. Any of the above factors could cause Savara to delay or suspend anticipated or ongoing trials, regulatory submissions or commercialization of its product candidates, entail higher costs or result in Savara being unable to effectively commercialize its products. Savara s dependence upon third parties for the manufacture of its clinical trial material may adversely affect its future costs and its ability to develop and commercialize its product candidates on a timely and competitive basis.

Savara relies significantly on third parties to conduct its nonclinical testing and clinical studies and other aspects of its development programs and if those third parties do not satisfactorily perform their contractual obligations or meet anticipated deadlines, the development of its product candidates could be adversely affected.

Savara does not employ personnel or possess the facilities necessary to conduct many of the activities associated with its programs. Savara engages consultants, advisors, CROs, CMOs and others to assist in the

design and conduct of nonclinical and clinical studies of its product candidates, with interpretation of the results of those studies and with regulatory activities, and Savara expects to continue to outsource all or a significant amount of such activities. As a result, many important aspects of its development programs are and will continue to be outside its direct control, and its third-party service providers may not perform their activities as required or expected including the maintenance of GCP, GLP and GMP compliance, which are ultimately Savara s responsibility to ensure. Further, such third parties may not be as committed to the success of Savara s programs as Savara s own employees and, therefore, may not devote the same time, thoughtfulness or creativity to completing projects or problem-solving as Savara s own employees would. To the extent Savara is unable to successfully manage the performance of third-party service providers, its business may be adversely affected.

The CROs that Savara engages to execute its clinical studies play a significant role in the conduct of the studies, including the collection and analysis of study data, and Savara likely will depend on CROs and clinical investigators to conduct future clinical studies and to assist in analyzing data from completed studies and developing regulatory strategies for its product candidates. Individuals working at the CROs with which it contracts, as well as investigators at the sites at which its studies are conducted, are not Savara s employees, and Savara has limited control over the amount or timing of resources that they devote to their programs. If Savara s CROs, study investigators, and/or third-party sponsors fail to devote sufficient time and resources to studies of its product candidates, if Savara and/or its CROs do not comply with all GLP and GCP regulatory and contractual requirements, or if their performance is substandard, it may delay commencement and/or completion of these studies, submission of applications for regulatory approval, regulatory approval, and commercialization of its product candidates. Failure of CROs to meet their obligations to Savara could adversely affect development of its product candidates.

In addition, CROs Savara engages may have relationships with other commercial entities, some of which may compete with Savara. Through intentional or unintentional means, Savara s competitors may benefit from lessons learned on the Savara project that could ultimately harm Savara s competitive position. Moreover, if a CRO fails to properly, or at all, perform its activities during a clinical study, Savara may not be able to enter into arrangements with alternative CROs on acceptable terms or in a timely manner, or at all. Switching CROs may increase costs and divert management time and attention. In addition, there likely would be a transition period before a new CRO commences work. These challenges could result in delays in the commencement or completion of Savara s clinical studies, which could materially impact its ability to meet its desired and/or announced development timelines and have a material adverse impact on its business and financial condition.

Savara currently has limited marketing capabilities and no sales organization. If Savara is unable to establish sales and marketing capabilities on its own or through third parties, it will be unable to successfully commercialize its products, if approved, or generate product revenue.

To commercialize Savara s products, if approved, in the United States and other jurisdictions it seeks to enter, Savara must build its marketing, sales, managerial and other non-technical capabilities or make arrangements with third parties to perform these services, and it may not be successful in doing so. If Savara s products receive regulatory approval, it expects to market such products in the United States through a focused, specialized sales force, which will be costly and time consuming. Savara has no prior experience in the marketing and sale of pharmaceutical products and there are significant risks involved in building and managing a sales organization, including its ability to hire, retain and incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel and effectively manage a geographically dispersed sales and marketing team. Outside of the United States, Savara may consider collaboration arrangements. If Savara is unable to enter into such arrangements on acceptable terms or at all, it may not be able to successfully commercialize its products in certain markets. Any failure or delay in the development of its internal sales, marketing and distribution capabilities would adversely impact the commercialization of its products. If Savara is not successful in commercializing its products, either on its own or

through collaborations with one or more third parties, its future product revenue will suffer and it would incur significant additional losses.

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Savara is the process of integrating the systems, people and contracts from the recent acquisition of Serendex and the complete scope and impact of the integration is unknown.

Savara s acquisition of the assets of Serendex Pharmaceuticals A/S on July 15, 2016 has inherent risks, including risks associated with the integration of operations, systems and personnel. Savara has devoted its resources towards the successful integration of the companies, but there is potential exposure to unknown or contingent liabilities of the acquired company, the possible loss of key employees, liability associated with the assumption of legacy agreements, and many other such risks typical for such acquisitions.

To establish a sales and marketing infrastructure and expand its manufacturing capabilities, Savara will need to increase the size of its organization, and Savara may experience difficulties in managing this growth.

As of December 31, 2016, Savara had 15 full-time employees, including 10 employees engaged in research and development. As Savara advances its product candidates through the development process and to commercialization, it will need to continue to expand its development, regulatory, quality, managerial, sales and marketing, operational, finance and other resources to manage its operations and clinical trials, continue its development activities and commercialize its product candidates, if approved. As its operations expand, Savara expects that it will need to manage additional relationships with various manufacturers and collaborative partners, suppliers and other organizations.

Due to Savara s limited financial resources and its limited experience in managing a company with such anticipated growth, Savara may not be able to effectively manage the expansion of its operations or recruit and train additional qualified personnel. In addition, the physical expansion of its operations may lead to significant costs and may divert its management and resources. Any inability to manage growth could delay the execution of its development and strategic objectives, or disrupt its operations, which could materially impact its business, revenue and operating results.

Savara s product candidates may cause undesirable side effects or adverse events, or have other properties that could delay or prevent its clinical development, regulatory approval or commercialization.

Undesirable side effects or adverse events caused by Savara s product candidates could interrupt, delay or halt clinical studies and could result in the denial of regulatory approval by the FDA or other regulatory authorities for any or all indications, and in turn prevent Savara from commercializing its product candidates. A significant challenge in clinical development is that the patient population in early studies, where small numbers of patients are required, is different to the patient population observed in later stage studies, where larger groups of patients are required. For example, patients in earlier stage studies may be more sick, compliant, or otherwise motivated than patients in larger studies. As such, efficacy or safety results may differ significantly between studies. Side-effects seen at high doses in earlier studies of AeroVanc, such as bronchoconstriction or other airway irritation, may be seen in significant numbers at the lower doses selected for later studies. Also, for AeroVanc, while not observed in the Phase 2 clinical study, the emergence of vancomycin-resistant MRSA could occur during the longer dosing period of AeroVanc that is currently planned for the Phase 3 clinical study. If this or other undesirable side effects occur, they could possibly prevent approval, which would have a material and adverse effect on its business.

If any of its product candidates receive marketing approval and Savara or others later identify undesirable side effects caused by the product:

regulatory authorities may require the addition of labeling statements, such as a black box warning or a contraindication;

regulatory authorities may withdraw its approval of the product;

Savara may be required to change the way the product is administered, conduct additional clinical studies or change the labeling of the product; and

its reputation may suffer.

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Any of these events could prevent Savara from achieving or maintaining market acceptance of the affected product or could substantially increase the costs and expenses of commercializing the product, which in turn could delay or prevent Savara from generating significant revenue from its sale.

Savara may not achieve its projected development goals in the time frames Savara has announced.

Savara has set goals for accomplishing certain objectives material to the successful development of its product candidates. The actual timing of these events may vary due to many factors, including delays or failures in its nonclinical testing, clinical studies and manufacturing and regulatory activities and the uncertainties inherent in the regulatory approval process. From time to time Savara creates estimates for the completion of enrollment of or announcement of data from clinical studies of its product candidates. However, predicting the rate of enrollment or the time from completion of enrollment to announcement of data for any clinical study requires Savara to make significant assumptions that may prove to be incorrect. As discussed in other risk factors above, its estimated enrollment rates and the actual rates may differ materially and the time required to complete enrollment of any clinical study may be considerably longer than Savara estimates. Such delays may adversely affect its financial condition and results of operations.

Even if Savara completes a clinical study with successful results, Savara may not achieve its projected development goals in the time frames Savara initially anticipates or announces. If a development plan for a product candidate becomes more extensive and costly than anticipated, Savara may determine that the associated time and cost are not financially justifiable and, as a result, may discontinue development in a particular indication or of the product candidate as a whole. In addition, even if a study did complete with successful results, changes may occur in regulatory requirements or policy during the period of product development and/or regulatory review of an NDA that relate to the data required to be included in NDAs which may require additional studies that may be costly and time consuming. Any of these actions may be viewed negatively, which could adversely impact its financial condition.

Further, throughout development, Savara must provide adequate assurance to the FDA and other regulatory authorities that Savara can consistently develop and produce its product candidates in conformance with GLP, GCP, cGMP, and other regulatory standards. As discussed above, Savara relies on CMOs for the manufacture of clinical, and future commercial, quantities of its product candidates. If future FDA or other regulatory authority inspections identify cGMP compliance deficiencies at these third-party facilities, production of its clinical trial material or, in the future, commercial product, could be disrupted, causing potentially substantial delay in or failure of development or commercialization of its product candidates.

Savara s employees, independent contractors and consultants, principal investigators, CROs, CMOs and other vendors, and any future commercial partners may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could cause significant liability for Savara and harm its reputation.

Savara is exposed to the risk that its employees, independent contractors and consultants, principal investigators, CROs, CMOs and other vendors, and any future commercial partners may engage in fraudulent conduct or other misconduct, including intentional failures to comply with FDA regulations or similar regulations of comparable foreign regulatory authorities, to provide accurate information to the FDA or comparable foreign regulatory authorities, to comply with manufacturing standards required by cGMP or Savara standards, to comply with federal and state healthcare fraud and abuse laws and regulations and similar laws and regulations established and enforced by comparable foreign regulatory authorities, and to report financial information or data accurately or disclose unauthorized activities to them. The misconduct of its employees and other Savara service providers could involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and

serious harm to its reputation. Savara intends to adopt a code of business ethics and conduct, but it is not always possible to identify and deter such misconduct, and the precautions Savara takes to detect and prevent this activity, such as the implementation of a quality system which

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entails vendor audits by quality experts, may not be effective in controlling unknown or unmanaged risks or losses or in protecting Savara from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against them, and Savara is not successful in defending itself or asserting its rights, those actions could have a significant impact on its business and results of operations, including the imposition of significant fines or other sanctions. For example, if one of its manufacturing partners was placed under a consent decree, Savara may be hampered in its ability to manufacture clinical or commercial supplies.

Savara s business and operations would suffer in the event of third-party computer system failures, cyber-attacks on third-party systems or deficiency in its cyber security.

Savara relies on information technology systems, including third-party cloud based service providers, to keep financial records, maintain laboratory, clinical data and corporate records, communicate with staff and external parties and operate other critical functions. This includes critical systems such as email, other communication tools, electronic document repositories, and archives. If any of these third-party information technology (IT) providers are compromised due to computer viruses, unauthorized access, malware, natural disasters, fire, terrorism, war and telecommunication failures, electrical failures, cyber-attacks or cyber-intrusions over the internet, then sensitive emails or documents could be exposed or deleted. Similarly, Savara could incur business disruption if its access to the internet is compromised and Savara is unable to connect with third-party IT providers. The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. In addition, Savara relies on those third parties to safeguard important confidential personal data regarding its employees and patients enrolled in its clinical trials. If a disruption event were to occur and cause interruptions in a third-party IT provider s operations, it could result in a disruption of its drug development programs. For example, the loss of clinical trial data from completed, ongoing or planned clinical trials could result in delays in its regulatory approval efforts and significantly increase its costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss of or damage to its data or applications, or inappropriate disclosure of confidential or proprietary information, Savara could incur liability and development of its product candidates could be delayed, or could fail.

Savara s operations might be interrupted by the occurrence of a natural disaster or other catastrophic event.

Savara s corporate headquarters is located in a single commercial facility in Austin, Texas, USA. Savara maintains a second office in a single commercial facility in Denmark where many of Savara s product development staff are located. Important documents and records, including copies of its regulatory documents and other records for its product candidates, are located both at a secure offsite document storage facility as well at its own facilities and Savara depends on its facilities for the continued operation of its business. Natural disasters and other catastrophic events, such as wildfires and other fires, earthquakes and extended power interruptions and terrorist attacks or severe weather conditions, could significantly disrupt its operations and result in additional, unplanned expense. As a small company with limited resources, Savara has not prepared or implemented a formal business continuity or disaster recovery plan and any natural disaster or catastrophic event could disrupt its business operations and result in setbacks to its development programs. Even though Savara believes it carries commercially reasonable insurance, Savara might suffer losses that are not covered by or exceed the coverage available under these insurance policies.

Risks Related to Drug Development and Commercialization

Savara depends on the successful completion of clinical studies of its product candidates, and any positive results in prior clinical studies do not ensure that ongoing or future clinical studies will be successful.

Pharmaceutical products are subject to stringent regulatory requirements covering quality, safety, and efficacy. The burden of proof is on the manufacturer, such as Savara, to show with substantial clinical data that

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the risk/benefit profile for any new drug is favorable. Only after successfully completing extensive pharmaceutical development, nonclinical testing, and clinical studies may a product be considered for regulatory approval.

Clinical studies are expensive, difficult to design and implement, they can take many years to complete, and outcomes are inherently uncertain. A drug product may fail to demonstrate positive results at any stage of testing despite having progressed satisfactorily through nonclinical testing and initial clinical studies. There is significant risk in clinical development where later stage clinical studies are designed and powered based on the analysis of data from earlier studies, with these earlier studies involving a smaller number of patients, and the results of the earlier studies being driven primarily by a subset of responsive patients. In addition, interim results of a clinical study do not necessarily predict final results. Further, clinical study data frequently are susceptible to varying interpretations. Medical professionals and/or regulatory authorities may analyze or weigh study data differently than the sponsor company, resulting in delay or failure to obtain marketing approval for a product candidate. Additionally, the possible lack of standardization across multiple investigative sites may induce variability in the results which can interfere with the evaluation of treatment effects.

If Savara licenses rights to develop its product candidates to independent third parties or otherwise permit such third parties to evaluate its product candidates in clinical studies, Savara may have limited control over those clinical studies. Any safety or efficacy concern identified in a third-party sponsored study could adversely affect its or another licensee s development of its product candidate and prospects for its regulatory approval, even if the data from that study are subject to varying interpretations and analyses.

There is significant risk that ongoing and future clinical studies of its product candidates are unsuccessful. Negative or inconclusive results could cause the FDA and other regulatory authorities to require Savara to repeat or conduct additional clinical studies, which could significantly increase the time and expense associated with development of that product candidate or cause Savara to elect to discontinue one or more clinical programs. Failure to complete a clinical study of a product candidate or an unsuccessful result of a clinical study could have a material adverse effect on its business.

Both of Savara s product candidates have received Orphan Drug Designation by the Food and Drug Administration (FDA) and Molgradex has received Orphan Drug Designation also in Europe. While orphan designation provides certain benefits there are also associated risks.

AeroVanc has been granted Orphan Drug Designation in the United States by the FDA for the treatment of persistent methicillin-resistant *Staphylococcus aureus* (MRSA) lung infection in patients with cystic fibrosis and Molgradex has received Orphan Drug Designation in the United States by the FDA and in Europe by the European Medicines Agency for the treatment of pulmonary alveolar proteinosis (PAP). Orphan Designation will not shorten the regulatory review or reduce the clinical data requirements needed to obtain approval. If approval is received to market either AeroVanc or Molgradex for the respective indications, FDA will not approve a similar product, with the same active ingredient, to AeroVanc or Molgradex for seven years and the European Medicines Agency will not approve a similar product to Molgradex for ten years, unless Savara is unable to produce enough supply to meet demand in the marketplace or another similar product, with the same active ingredient, is deemed clinically superior. Similar product candidates, with the same active ingredient and route of delivery, may be granted Orphan Drug Designation during the development of the respective products, but the Orphan Drug exclusivity is granted only to the first of such products approved, which means there is risk that a competitor product candidate may receive approval and Orphan Drug exclusivity before Savara, thus preventing Savara from marketing one or more of its product candidates until the exclusivity of the competing product expires. Also, the Orphan Drug status will not prevent a competitor with a different active ingredient from competing with Savara s product candidates. If Savara is prevented from marketing one or more product candidates due to a competitor s Orphan Drug exclusivity, this would have a material adverse

effect on its business.

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Delays in commencement and completion of clinical studies are common and have many causes. Delays in clinical studies of Savara s product candidates could increase overall development costs and jeopardize its ability to obtain regulatory approval and successfully commercialize any approved products.

Clinical testing typically is expensive, can take many years to complete, and its outcome is inherently uncertain. Clinical studies may not commence on time or be completed on schedule, if at all. The commencement and completion of clinical studies can be delayed for a variety of reasons, including:

inability to raise sufficient funding to initiate or continue a clinical study;

delays in obtaining regulatory approval to commence a clinical study;

delays in identifying and reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical study sites and investigators, which agreements can be subject to extensive negotiation and may vary significantly among study sites;

delays in obtaining regulatory approval in a prospective country;

delays in obtaining ethic committee approval to conduct a clinical study at a prospective site;

delays in reaching agreements on acceptable terms with prospective contract manufacturing organizations, or CMOs, or other vendors for the production and supply of clinical trial material and, if necessary, drug administration devices, which agreements can be subject to extensive negotiation;

delays in the production or delivery of sufficient quantities of clinical trial material or drug delivery devices from its CMOs and other vendors to initiate or continue a clinical study;

delays due to product candidate recalls as result of stability failure, excessive product complaints or other failures of the product candidate during its use or testing;

invalidation of clinical data caused by premature unblinding or integrity issues;

invalidation of clinical data caused by mixing up of the active drug and placebo through randomization or manufacturing errors;

delays on the part of its CROs, CMOs, and other third-party contractors in developing procedures and protocols or otherwise conducting activities in accordance with applicable policies and procedures and in accordance with agreed upon timelines;

delays in identifying and hiring or engaging, as applicable, additional employees or consultants to assist in managing clinical study-related activities;

delays in recruiting and enrolling individuals to participate in a clinical study, which historically can be challenging in orphan diseases;

delays caused by patients dropping out of a clinical study due to side effects, concurrent disorders, difficulties in adhering to the study protocol, unknown issues related to different patient profiles than in previous studies, such as the reduced age limit required for inclusion into the planned AeroVanc Phase 3 study, or otherwise;

delays in having patients complete participation in a clinical study, including returning for post-treatment follow-up;

delays resulting from study sites dropping out of a trial, providing inadequate staff support for the study, problems with shipment of study supplies to clinical sites or focusing its staff s efforts on enrolling studies that compete for the same patient population;

suspension of enrollment at a study site or the imposition of a clinical hold by the FDA or other regulatory authority following an inspection of clinical study operations at study sites or finding of a drug-related serious adverse event; and

delays in quality control/quality assurance procedures necessary for study database lock and analysis of unblinded data.

Patient enrollment, a critical component to successful completion of a clinical study, is affected by many factors, including the size and nature of the study population, the proximity of patients to clinical sites, the eligibility criteria for the study, the design of the clinical study, ongoing studies competing for the same patient population and clinicians , patients perceptions as to the potential advantages of the drug being studied in relation to available alternatives, including therapies being investigated by other companies which may be viewed as more beneficial or important to study, fear of being randomized to the placebo arm, and changes in standard of care. Challenges to complete enrollment can be exacerbated in orphan indications, like those being pursued by Savara, with a limited number of qualifying patients and the lack of clinical sites with the necessary expertise and experience to conduct Savara s studies. Further, completion of a clinical study and/or its results may be adversely affected by failure to retain patients who enroll in a study but withdraw due to adverse side effects, perceived lack of efficacy, belief that they are on placebo, improvement in condition before treatment has been completed, or for personal reasons, or without reason, or by patients who fail to return for or complete post-treatment follow-up.

Clinical studies may not begin on time or be completed in the time frames Savara anticipates and may be costlier than Savara anticipates for a variety of reasons, including one or more of those described above. The length of time necessary to successfully complete clinical studies varies significantly and is difficult to predict accurately. Savara may make statements regarding anticipated timing for completion of enrollment in and/or availability of results from its clinical studies, but such predictions are subject to a number of significant assumptions and actual timing may differ materially for a variety of reasons, including patient enrollment rates, length of time needed to prepare raw study data for analysis and then to review and analyze it, and other factors described above. If Savara experiences delays in the completion of a clinical study, if a clinical study is terminated, or if failure to conduct a study in accordance with regulatory requirements or the study s protocol leads to deficient safety and/or efficacy data, the regulatory approval and/or commercial prospects for its product candidates may be harmed and its ability to generate product revenue will be delayed. In addition, any delays in completing its clinical studies likely will increase its development costs. Further, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical studies may ultimately lead to the denial of regulatory approval of a product candidate. Even if Savara ultimately commercializes its product candidates, the standard of care may have changed or other therapies for the same indications may have been introduced to the market in the interim and may establish a competitive threat to Savara or diminish the need for Savara s products.

Clinical studies are very expensive, difficult to design and implement, often take many years to complete, and the outcome is inherently uncertain.

Clinical development of pharmaceutical products for humans is generally very expensive, takes many years to complete and failures can occur at any stage of clinical testing. Savara estimates that clinical development of its product candidates will take several additional years to complete, but because of the variety of factors that can affect the design, timing and outcome of clinical studies, Savara is unable to estimate the exact funds required to complete research and development, obtain regulatory approval and commercialize all of its product candidates. Savara will need significant additional capital to continue to advance its products as per current business plans.

Failure at any stage of clinical testing is not uncommon and Savara may encounter problems that would require additional, unplanned studies or cause Savara to abandon a clinical development program.

In addition, a clinical study may be suspended or terminated by Savara, an IRB, a data safety monitoring board, the FDA or other regulatory authorities due to a number of factors, including:

lack of adequate funding to continue the study;

failure to conduct the study in accordance with regulatory requirements or the study s protocol;

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inspection of clinical study operations or sites by the FDA or other regulatory authorities resulting in the imposition of a clinical hold;

unforeseen safety issues, including adverse side effects; or

changes in governmental regulations or administrative actions.

Changes in governmental regulations and guidance relating to clinical studies may occur and Savara may need to amend study protocols to reflect these changes, or Savara may amend study protocols for other reasons. Amendments may require Savara to resubmit protocols to IRBs for reexamination and approval or renegotiate terms with CROs, study sites and investigators, all of which may adversely impact the costs or timing of or its ability to successfully complete a trial.

There is significant uncertainty regarding the regulatory approval process for any investigational new drug, substantial further testing and validation of its product candidates and related manufacturing processes may be required, and regulatory approval may be conditioned, delayed or denied, any of which could delay or prevent Savara from successfully marketing its product candidates and substantially harm its business.

Pharmaceutical products generally are subject to rigorous nonclinical testing and clinical studies and other approval procedures mandated by the FDA and foreign regulatory authorities. Various federal and foreign statutes and regulations also govern or materially influence the manufacturing, safety, labeling, storage, record keeping and marketing of pharmaceutical products. The process of obtaining these approvals and the subsequent compliance with appropriate U.S. and foreign statutes and regulations is time-consuming and requires the expenditure of substantial resources.

Savara is preparing AeroVanc for a Phase 3 trial, the success of which will be needed for FDA approval to market AeroVanc in the United States to treat persistent MRSA lung infection in cystic fibrosis patients. While significant communication with the FDA on the Phase 3 study design has occurred, even if the Phase 3 clinical study meets all of its statistical goals and protocol end points, the FDA may not view the results as robust and convincing. They may require additional clinical studies and/or other costly studies, which could require Savara to expend substantial additional resources and could significantly extend the timeline for clinical development prior to market approval. Additionally, Savara is required by the FDA to conduct a two-year nonclinical carcinogenicity study on the AeroVanc powder. The results of this study will not be known until a short time prior to potential submission of an NDA for AeroVanc. If the carcinogenicity study cannot be completed for technical or other reasons, or provides results that the FDA determine to be concerning, this may cause a delay or failure in obtaining approval for AeroVanc.

Molgradex is currently undergoing a Phase 2/3 clinical study in Europe and Japan. Concurrently, Savara plans to make formulation changes to Molgradex that would simplify the composition of the drug product and eliminate potentially harmful excipients. While this change is expected by Savara to reduce studies and/or other documentation requirements, the regulatory agencies may require additional clinical or nonclinical studies prior to approval, even if current clinical studies are deemed successful, which could require Savara to expend substantial additional resources and significantly extend the timeline for clinical development of Molgradex in PAP.

Savara is currently undergoing active discussion with the FDA on the requirements for obtaining IND approval to initiate clinical studies in the United States and achieve NDA approval for Molgradex. However, no agreement has yet been reached on the design of the clinical program required for the submission of an NDA, and there is risk that reaching agreement may take longer than currently planned, or the FDA may require such studies that Savara deems

unfeasible, preventing Savara to reach agreement with the FDA, which may result in delay or failure to complete the development of Molgradex in the US.

Significant uncertainty exists with respect to the regulatory approval process for any investigational new drug, including AeroVanc and Molgradex. Regardless of any guidance the FDA or foreign regulatory agencies

may provide a drug s sponsor during its development, the FDA or foreign regulatory agencies retains complete discretion in deciding whether to accept an NDA or the equivalent foreign regulatory approval submission for filing or, if accepted, approve an NDA. There are many components to an NDA or marketing authorization application submission in addition to clinical study data. For example, the FDA or foreign regulatory agencies will review the sponsor s internal systems and processes, as well as those of its CROs, CMOs and other vendors, related to development of its product candidates, including those pertaining to its clinical studies and manufacturing processes. Before accepting an NDA for review or before approving the NDA, the FDA or foreign regulatory agencies may request that Savara provide additional information that may require significant resources and time to generate and there is no guarantee that its product candidates will be approved for any indication for which Savara may apply. The FDA or foreign regulatory agencies may choose not to approve an NDA for any of a variety of reasons, including a decision related to the safety or efficacy data, manufacturing controls or systems, or for any other issues that the agency may identify related to the development of its product candidates. Even if one or more Phase 3 clinical studies are successful in providing statistically significant evidence of the efficacy and safety of the investigational drug, the FDA or foreign regulatory agencies may not consider efficacy and safety data from the submitted studies adequate scientific support for a conclusion of effectiveness and/or safety and may require one or more additional Phase 3 or other studies prior to granting marketing approval. If this were to occur, the overall development cost for the product candidate would be substantially greater and its competitors may bring products to market before Savara, which could impair its ability to generate revenues from the product candidates, or even seek approval, if blocked by a competitor s Orphan Drug exclusivity, which would have a material adverse effect on Savara s business, financial condition and results of operations.

Further, development of Savara s product candidates and/or regulatory approval may be delayed for reasons beyond its control. For example, U.S. federal government shut-down or budget sequestration, such as one that occurred during 2013, may result in significant reductions to the FDA s budget, employees and operations, which may lead to slower response times and longer review periods, potentially affecting Savara s ability to progress development of its product candidates or obtain regulatory approval for its product candidates.

Even if the FDA or foreign regulatory agencies grant approvals for Savara s product candidates, the conditions or scope of the approval(s) may limit successful commercialization of the product candidates and impair Savara s ability to generate substantial sales revenue. For example, the FDA may approve label claims for AeroVanc with age restrictions and/or treatment duration limitations, or Molgradex with restrictions for use only by patients unresponsive to the current standard of care. They may limit the label of AeroVanc or Molgradex to a subset of patients based on a review of which patient groups had the greatest efficacious response in clinical studies. Such label restriction may be undesirable and may limit successful commercialization. The FDA or foreign regulatory agencies may also only grant marketing approval contingent on the performance of costly post-approval nonclinical or clinical studies, or subject to warnings or contraindications that limit commercialization. Additionally, even after granting approval, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for its products will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, and continued compliance with current good manufacturing processes, or cGMP, good clinical practices, international conference on harmonization regulations and good laboratory practices, which are regulations and guidelines that are enforced by the FDA or foreign regulatory agencies for all of its clinical development and for any clinical studies that Savara conducts post-approval. The FDA or foreign regulatory agencies may decide to withdraw approval, add warnings or narrow the approved indications in the product label, or establish risk management programs that could restrict distribution of its products. These actions could result from, among other things, safety concerns, including unexpected side effects or drug-drug interaction problems, or concerns over misuse of a product. If any of these actions were to occur following approval, Savara may have to discontinue commercialization of the product, limit its sales and marketing efforts, implement risk minimization procedures, and/or conduct post-approval studies, which in

turn could result in significant expense and delay or limit its ability to generate sales revenues.

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Regulations may be changed prior to submission of an NDA that require higher hurdles than currently anticipated. These may occur as a result of drug scandals, recalls, or a political environment unrelated to Savara s products.

Even if Savara receives regulatory approval for a product candidate, Savara may face regulatory difficulties that could materially and adversely affect its business, financial condition and results of operations.

Even if initial regulatory approval is obtained, as a condition to the initial approval the FDA or a foreign regulatory agency may impose significant restrictions on a product s indicated uses or marketing or impose ongoing requirements for potentially costly post-approval studies or marketing surveillance programs, any of which would limit the commercial potential of the product. Its product candidates also will be subject to ongoing FDA requirements related to the manufacturing processes, labeling, packaging, storage, distribution, advertising, promotion, record-keeping and submission of safety and other post-market information regarding the product. For instance, the FDA may require changes to approved drug labels, require post-approval clinical studies and impose distribution and use restrictions on certain drug products. In addition, approved products, manufacturers and manufacturers facilities are subject to continuing regulatory review and periodic inspections. If previously unknown problems with a product are discovered, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, the FDA may impose restrictions on that product or Savara, including requiring withdrawal of the product from the market. If Savara or a CMO of Savara s fail to comply with applicable regulatory requirements, a regulatory agency may:

issue warning letters or untitled letters;

impose civil or criminal penalties;

suspend or withdraw regulatory approval;

suspend or terminate any ongoing clinical studies;

refuse to approve pending applications or supplements to approved applications;

exclude its product from reimbursement under government healthcare programs, including Medicaid or Medicare;

impose restrictions or affirmative obligations on Savara s or its CMO s operations, including costly new manufacturing requirements;

close the facilities of a CMO; or

seize or detain products or require a product recall.

If any of Savara s product candidates for which Savara receive regulatory approval fails to achieve significant market acceptance among the medical community, patients or third-party payers, the revenue Savara generates from its sales will be limited and its business may not be profitable.

Savara s success will depend in substantial part on the extent to which its product candidates, if approved, are accepted by the medical community and patients and reimbursed by third-party payers, including government payers. The degree of market acceptance with respect to each of its approved products, if any, will depend upon a number of factors, including:

the safety and efficacy of its products as demonstrated in clinical studies;

acceptance in the medical and patient communities of its products as a safe and effective treatment;

the product s taste, ease of use, or features associated with the delivery device;

the perceived advantages of its product over alternative treatments, including with respect to the incidence and severity of any adverse side effects and the cost of treatment;

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- the indications for which its product is approved;
- claims or other information (including limitations or warnings) in its product s approved labeling;
- reimbursement and coverage policies of government and other third-party payers;
- pricing and cost-effectiveness of its product relative to alternative treatments;
- availability of alternative treatments;
- smaller than expected market size due to lack of disease awareness of a rare disease, or the patient population with a specific rare disease being smaller than anticipated;
- inappropriate diagnostic efforts due to limited knowledge and/or resources among clinicians;
- the prevalence of off-label substitution of chemically equivalent products or alternative treatments; and
- the resources Savara devotes to marketing its product and restrictions on promotional claims Savara can make with respect to the product.

Savara cannot predict with reasonable accuracy whether physicians, patients, healthcare insurers or health maintenance organizations, or the medical community in general, will accept or utilize any of its products, if approved. If its product candidates are approved but do not achieve an adequate level of acceptance by these parties, Savara may not generate sufficient revenue to become or remain profitable. In addition, its efforts to educate the medical community and third-party payers regarding benefits of its products may require significant resources and may never be successful.

If Savara determines that a product candidate may not achieve adequate market acceptance or that the potential market size does not justify additional expenditure on the program, Savara may reduce its expenditures on the development and/or the process of seeking regulatory approval of the product candidate while Savara evaluates whether and on what timeline to move the program forward.

Even if Savara receives regulatory approval to market one or more of its product candidates in the United States, Savara may never receive approval or commercialize its products outside of the United States, which would limit its ability to realize the full commercial potential of its product candidates.

In order to market products outside of the United States, Savara must establish and comply with the numerous and varying regulatory requirements of other countries regarding safety and efficacy. Approval procedures vary among countries and can involve additional product testing and validation and additional administrative review periods. The time required to obtain approval in other countries generally differs from that required to obtain FDA approval. The regulatory approval process in other countries may include all of the risks detailed above regarding FDA approval in

the United States, as well as other risks. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. Failure to obtain regulatory approval in other countries or any delay or setback in obtaining such approval could have the same adverse effects detailed above regarding FDA approval in the United States. As described above, such effects include the risks that its product candidates may not be approved for all indications requested, which could limit the uses of its product candidates and have an adverse effect on product sales, and that such approval may be subject to limitations on the indicated uses for which the product may be marketed or require costly, post-marketing follow-up studies.

Conversely, if the product candidates do receive approval outside the US in the future, Savara may not meet the FDA requirements in the United States for approval. For example, Molgradex is currently being studied in Europe and Japan in what could be a pivotal study for use of Molgradex to treat PAP. However, in the United States, Savara does not yet have approval from the FDA to start clinical studies with Molgradex due to different requirements by the FDA, which have not yet been met or agreed upon.

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Savara must comply with the U.S. Foreign Corrupt Practices Act and similar foreign anti-corruption laws.

The U.S. Foreign Corrupt Practices Act, to which Savara is subject, prohibits corporations and individuals from engaging in certain activities to obtain or retain business or to influence a person working in an official capacity. It is illegal to pay, offer to pay or authorize the payment of anything of value to any foreign government official, government staff member, political party or political candidate in an attempt to obtain or retain business or to otherwise influence a person working in an official capacity. Other countries, such as the U.K., have similar laws with which Savara must comply. Savara faces the risk that an employee or agent could be accused of violating one or more of these laws, particularly in geographies where significant overlap exists between local government and healthcare industries. Such an accusation, even if unwarranted, could prove disruptive to Savara s developmental and commercialization efforts.

Risks Related to Savara s Intellectual Property

Savara s success will depend in part on obtaining and maintaining effective patent and other intellectual property protection for its product candidates and proprietary technology.

AeroVanc has received a U.S. Patent Notice of Allowance for its formulation in the United States, AeroVanc s primary market. AeroVanc has either been issued patents or is prosecuting patent applications in numerous countries outside the United States. Savara has no patent protection for Molgradex for the treatment of PAP, and primarily relies on the Orphan Drug exclusivity as its primary barrier to competition. Both AeroVanc and Molgradex utilize proprietary delivery devices with exclusive supply agreements. Molgradex is eligible for protection via a proprietary cell bank used in the production of the drug substance. However, Savara s success will depend in part on its ability to:

- obtain and maintain patent and other exclusivity with respect to Savara s products and its uses;
- prevent third parties from infringing upon its proprietary rights;
- maintain proprietary know-how and trade secrets;
- operate without infringing upon the patents and proprietary rights of others; and
- obtain appropriate licenses to patents or proprietary rights held by third parties if infringement would otherwise occur or if necessary to secure exclusive rights to them, both in the United States and in foreign countries.

The patent and intellectual property positions of biopharmaceutical companies generally are highly uncertain, involve complex legal and factual questions, and have been and continue to be the subject of much litigation. There is no guarantee that Savara has or will develop or obtain the rights to products or processes that are patentable, that patents will issue from any pending applications or that claims allowed will be sufficient to protect the technology Savara develops or have developed or that is used by Savara, its CMOs or its other service providers. In addition, any patents that are issued to Savara may be limited in scope or challenged, invalidated, infringed or circumvented, including by its competitors, and rights Savara have under issued patents may not provide competitive advantages to Savara. If

competitors can develop and commercialize technology and products similar to Savara s, its ability to successfully commercialize its technology and products may be impaired.

Patent applications in the United States are confidential for a period of time until they are published, and publication of discoveries in scientific or patent literature typically lags actual discoveries by several months. As a result, Savara cannot be certain that the inventors listed in any patent or patent application owned by Savara were the first to conceive of the inventions covered by such patents and patent applications (for U.S. patent applications filed before March 16, 2013), or that such inventors were the first to file patent applications for such inventions outside the United States and, after March 15, 2013, in the United States. In addition, changes in or different interpretations of patent laws in the United States and foreign countries may affect Savara s patent rights and limit the number of patents Savara can obtain, which could permit others to use its discoveries or to develop and commercialize Savara s technology and products without any compensation to Savara.

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Savara s AeroVanc patent is specific to the formulation of the AeroVanc powder. While this may prevent identical products from entering the market, it may not preclude someone skilled in the art from inventing an alternate formulation approach with comparable or improved characteristics.

Savara also relies on unpatented know-how and trade secrets and continuing technological innovation to develop and maintain its competitive position, which Savara seeks to protect, in part, through confidentiality agreements with employees, consultants, collaborators and others. Savara also has invention or patent assignment agreements with its employees and certain consultants. The steps Savara have taken to protect its proprietary rights, however, may not be adequate to preclude misappropriation of or otherwise protect its proprietary information or prevent infringement of its intellectual property rights, and Savara may not have adequate remedies for any such misappropriation or infringement. In addition, it is possible that inventions relevant to Savara s business could be developed by a person not bound by an invention assignment agreement with Savara or independently discovered by a competitor.

Savara also intends to rely on regulatory exclusivity for protection of its product candidates, if approved for commercial sale. Implementation and enforcement of regulatory exclusivity, which may consist of regulatory data protection and market protection, varies widely from country to country. Failure to qualify for regulatory exclusivity, or failure to obtain or maintain the extent or duration of such protections that Savara expects for its product candidates, if approved, could affect its decision on whether to market the products in a particular country or countries or could otherwise have an adverse impact on its revenue or results of operations. For Molgradex, which is administered via nebulization, Savara may rely on regulatory exclusivity for the combination of Molgradex and its delivery system. However, there is no assurance that its Molgradex product and its delivery system, if approved, will benefit from this type of market protection.

Savara may rely on trademarks, trade names and brand names to distinguish its products, if approved for commercial sale, from the products of its competitors. Savara intends to seek approval for new names for AeroVanc and Molgradex that meet the FDA s and foreign regulatory requirements. However, Savara s trademark applications may not be approved. Third parties may also oppose Savara s trademark applications or otherwise challenge its use of the trademarks in which case Savara may expend substantial resources to defend its proposed or approved trademarks and may enter into agreements with third parties that may limit Savara s use of its trademarks. In the event that Savara s trademarks are successfully challenged, Savara could be forced to rebrand its product, which could result in loss of brand recognition and could require Savara to devote significant resources to advertising and marketing these new brands. For example, Savara filed a trademark for the name Savara and was challenged. Savara decided to terminate its application, which it may revisit such filings at a future date. Further, Savara s competitors may infringe its trademarks or Savara may not have adequate resources to enforce its trademarks.

Savara s success depends on its ability to prevent competitors from duplicating or developing and commercializing equivalent versions of its product candidates, but patent protection may be difficult to obtain and any issued claims may be limited.

Savara has filed for patent protection in the United States and other countries to cover the formulation of AeroVanc and was granted a notice of allowance in the United States, its primary market. However, this patent may not provide Savara with significant competitive advantages, because the validity or enforceability of the patents may be challenged and, if instituted, one or more of the challenges may be successful. Patents may be challenged in the United States under post-grant review proceedings, *inter partes* reexamination, *ex parte* re-examination, or challenges in district court. Any patents issued in foreign jurisdictions may be subjected to comparable proceedings lodged in various foreign patent offices, or courts. These proceedings could result in either loss of the patent or loss or reduction in the scope of one or more of the claims of the patent. Even if a patent issues, and is held valid and enforceable, competitors may be able to design around Savara s patents, such as by using pre-existing or newly developed

technology, in which case competitors may not infringe Savara s issued claims and may be able to market and sell products that compete directly with Savara s before and after its patents expire.

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The patent prosecution process is expensive and time-consuming. Savara and any future licensors and licensees may not apply for or prosecute patents on certain aspects of its product candidates at a reasonable cost, in a timely fashion, or at all. Savara may not have the right to control the preparation, filing and prosecution of some patent applications related to its product candidates or technologies. As a result, these patents and patent applications may not be prosecuted and enforced in a manner consistent with the best interests of Savara. It is also possible that Savara or any future licensors or licensees will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Further, it is possible that defects of form in the preparation or filing of Savara s patent applications may exist, or may arise in the future, such as with respect to proper priority claims, inventorship, assignment, or claim scope. If there are material defects in the form or preparation of its patents or patent applications, such patents or applications may be invalid or unenforceable. In addition, one or more parties may independently develop similar technologies or methods, duplicate its technologies or methods, or design around the patented aspects of its products, technologies or methods. Any of these circumstances could impair Savara s ability to protect its products, if approved, in ways which may have an adverse impact on Savara s business, financial condition and operating results.

Furthermore, the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and Savara s owned and licensed patents may be challenged in the courts or patent offices in and outside of the United States. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit Savara s ability use its patents to stop others from using or commercializing similar or identical products or technology, or limit the duration of the patent protection of its technology and drugs. Given the amount of time required for the development, testing and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, Savara s owned and licensed patent portfolio may not provide Savara with sufficient rights to exclude others from commercializing drugs similar or identical to those of Savara once Orphan Drug and Qualified Infectious Disease Product exclusivities have expired. See the section entitled Risks Related to Savara s Industry for further description of Orphan Drug and Qualified Infectious Disease Product exclusivities.

Enforcement of intellectual property rights in certain countries outside the United States, including China in particular, has been limited or non-existent. Future enforcement of patents and proprietary rights in many other countries will likely be problematic or unpredictable. Moreover, the issuance of a patent in one country does not assure the issuance of a similar patent in another country. Claim interpretation and infringement laws vary by nation, so the extent of any patent protection is uncertain and may vary in different jurisdictions.

Obtaining and maintaining patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and Savara s patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and applications are required to be paid to the United States Patent and Trademark Office, or USPTO, and various governmental patent agencies outside of the United States in several stages over the lifetime of the patents and applications. The USPTO and various non-U.S. governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process and after a patent has issued. There are situations in which non-compliance can result in decreased patent term adjustment or in abandonment or lapse of the patent or patent application, leading to partial or complete loss of patent rights in the relevant jurisdiction.

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Third parties may claim that Savara s products, if approved, infringe on their proprietary rights and may challenge the approved use or uses of a product or its patent rights through litigation or administrative proceedings, and defending such actions may be costly and time consuming, divert management attention away from Savara s business, and result in an unfavorable outcome that could have an adverse effect on Savara s business.

Savara s commercial success depends on its ability and the ability of its CMOs and component suppliers to develop, manufacture, market and sell its products and product candidates and use its proprietary technologies without infringing the proprietary rights of third parties. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which Savara is or may be developing products. Because patent applications can take many years to publish and issue, there currently may be pending applications, unknown to Savara, that may later result in issued patents that its products, product candidates or technologies infringe, or that the process of manufacturing its products or any of its respective component materials, or the component materials themselves, infringe, or that the use of its products, product candidates or technologies infringe.

Savara or its CMOs or component material suppliers may be exposed to, or threatened with, litigation by third parties alleging that Savara s products, product candidates and/or technologies infringe its patents and/or other intellectual property rights, or that one or more of the processes for manufacturing its products or any of its respective component materials, or the component materials themselves, or the use of its products, product candidates or technologies, infringe its patents and/or other intellectual property rights. If a third-party patent or other intellectual property right is found to cover its products, product candidates, technologies or its uses, or any of the underlying manufacturing processes or components, Savara could be required to pay damages and could be unable to commercialize its products or use its technologies or methods unless Savara is able to obtain a license to the patent or intellectual property right. A license may not be available to Savara in a timely manner or on acceptable terms, or at all. In addition, during litigation, the third-party alleging infringement could obtain a preliminary injunction or other equitable remedy that could prohibit Savara from making, using, selling or importing its products, technologies or methods.

There generally is a substantial amount of litigation involving patent and other intellectual property rights in the industries in which Savara operates and the cost of such litigation may be considerable. Savara can provide no assurance that its product candidates or technologies will not infringe patents or rights owned by others, licenses to which might not be available to Savara in a timely manner or on acceptable terms, or at all. If a third party claims that Savara or its CMOs or component material suppliers infringe its intellectual property rights, Savara may face a number of issues, including, but not limited to:

- infringement and other intellectual property claims which, with or without merit, may be expensive and time consuming to litigate and may divert management s time and attention from Savara s core business;

- substantial damages for infringement, including the potential for treble damages and attorneys fees, which Savara may have to pay if it is determined that the product and/or its use at issue infringes or violates the third party s rights;

- a court prohibiting Savara from selling or licensing the product unless the third-party licenses its intellectual property rights to Savara, which it may not be required to do;

if a license is available from the third party, Savara may have to pay substantial royalties, fees and/or grant cross-licenses to the third party; and

redesigning Savara s products or processes so they do not infringe, which may not be possible or may require substantial expense and time.

No assurance can be given that patents do not exist, have not been filed, or could not be filed or issued, which contain claims covering Savara s products, product candidates or technology or those of its CMOs or

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component material suppliers or the use of its products, product candidates or technologies. Because of the large number of patents issued and patent applications filed in the industries in which Savara operates, there is a risk that third parties may allege they have patent rights encompassing Savara s products, product candidates or technologies, or those of its CMOs or component material suppliers, or uses of its products, product candidates or technologies.

In the future, it may be necessary for Savara to enforce its proprietary rights, or to determine the scope, validity and unenforceability of other parties proprietary rights, through litigation or other dispute proceedings, which may be costly, and to the extent Savara is unsuccessful, adversely affect its rights. In these proceedings, a court or administrative body could determine that its claims, including those related to enforcing patent rights, are not valid or that an alleged infringer has not infringed its rights. The uncertainty resulting from the mere institution and continuation of any patent- or other proprietary rights-related litigation or interference proceeding could have a material and adverse effect on its business prospects, operating results and financial condition.

Risks Related to Savara s Industry

Savara expects competition in the marketplace for its product candidates, should any of them receive regulatory approval.

AeroVanc and Molgradex have received Orphan Drug Designation from FDA and Molgradex has received Orphan Drug Designation from the European Medicines Agency. Orphan Drug Designation will provide market exclusivity in U.S. for seven years and 10 years in Europe, but only if (1) AeroVanc and Molgradex receive market approval before a competitor using the same active compound for the same indication, (2) Savara is able produce sufficient supply to meet demand in the marketplace, and (3) another product with the same active ingredient is not deemed clinically superior. AeroVanc has also received Qualified Infectious Disease Product (QIDP) status extending market exclusivity by an additional five years in addition to any other exclusivity obtained in the United States

The industries in which Savara operates (biopharmaceutical, specialty pharmaceutical, biotechnology and pharmaceutical) are highly competitive and subject to rapid and significant change. Developments by others may render potential application of any of its product candidates in a particular indication obsolete or noncompetitive, even prior to completion of its development and approval for that indication. If successfully developed and approved, Savara expects its product candidates will face competition. Savara may not be able to compete successfully against organizations with competitive products, particularly large pharmaceutical companies. Many of its potential competitors have significantly greater financial, technical and human resources than Savara, and may be better equipped to develop, manufacture, market and distribute products. Many of these companies operate large, well-funded research, development and commercialization programs, have extensive experience in nonclinical and clinical studies, obtaining FDA and other regulatory approvals and manufacturing and marketing products, and have multiple products that have been approved or are in late-stage development. These advantages may enable them to receive approval from the FDA or any foreign regulatory agency before Savara and prevent Savara from competing due to their orphan drug protections. Smaller companies may also prove to be significant competitors, particularly through collaborative arrangements with large pharmaceutical and biotechnology companies. Furthermore, heightened awareness on the part of academic institutions, government agencies and other public and private research organizations of the potential commercial value of their inventions have led them to actively seek to commercialize the technologies they develop, which increases competition for investment in Savara s programs. Competitive products may be more effective, easier to dose, or more effectively marketed and sold, than theirs, which would have a material adverse effect on Savara s ability to generate revenue.

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Savara is subject to uncertainty relating to healthcare reform measures and reimbursement policies that, if not favorable to its products, could hinder or prevent its products commercial success, if any of its product candidates are approved.

The unavailability or inadequacy of third-party payer coverage and reimbursement could negatively affect the market acceptance of its product candidates and the future revenues Savara may expect to receive from those products. The commercial success of its product candidates, if approved, will depend in part on the extent to which the costs of such products will be covered by third-party payers, such as government health programs, commercial insurance and other organizations. Third-party payers are increasingly challenging the prices and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. These challenges to prices may be problematic to Savara since its products are targeted for a small number of patients (those suffering from orphan diseases) thus requiring Savara to charge very high prices in order to recover development costs and achieve a profit on its revenue. If these third-party payers do not consider its products to be cost-effective compared to other therapies, Savara may not obtain coverage for its products after approval as a benefit under the third-party payers plans or, even if Savara does, the level of coverage or payment may not be sufficient to allow Savara to sell its products on a profitable basis.

Significant uncertainty exists as to the reimbursement status for newly approved drug products, including coding, coverage and payment. There is no uniform policy requirement for coverage and reimbursement for drug products among third-party payers in the United States, therefore coverage and reimbursement for drug products can differ significantly from payer to payer. The coverage determination process is often a time-consuming and costly process that will require Savara to provide scientific and clinical support for the use of its products to each payer separately, with no assurance that coverage and adequate payment will be applied consistently or obtained. The process for determining whether a payer will cover and how much it will reimburse a product may be separate from the process of seeking approval of the product or for setting the price of the product. Even if reimbursement is provided, market acceptance of its products may be adversely affected if the amount of payment for its products proves to be unprofitable for healthcare providers or less profitable than alternative treatments or if administrative burdens make its products less desirable to use. Third-party payer reimbursement to providers of its products, if approved, may be subject to a bundled payment that also includes the procedure of administering its products or third-party payers may require providers to perform additional patient testing to justify the use of its products. To the extent there is no separate payment for its product(s), there may be further uncertainty as to the adequacy of reimbursement amounts.

The continuing efforts of governments, private insurance companies, and other organizations to contain or reduce costs of healthcare may adversely affect:

Savara s ability to set an appropriate price for its products;

the rate and scope of adoption of its products by healthcare providers;

its ability to generate revenue or achieve or maintain profitability;

the future revenue and profitability of its potential customers, suppliers and collaborators; and

its access to additional capital.

Savara s ability to successfully commercialize its products will depend in part on the extent to which governmental authorities, private health insurers and other organizations establish what Savara believes are appropriate coverage and reimbursement for its products. The containment of healthcare costs has become a priority of federal and state governments worldwide and the prices of drug products have been a focus in this effort. For example, there have been several recent U.S. Congressional inquiries and proposed bills designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs and the new US President has stated that reducing drug pricing is a priority for his administration. Savara expect that federal, state and local governments in the United States, as well as in other countries, will continue to consider

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legislation directed at lowering the total cost of healthcare. In addition, in certain foreign markets, the pricing of drug products is subject to government control and reimbursement may in some cases be unavailable or insufficient. It is uncertain whether and how future legislation, whether domestic or abroad, could affect prospects for its product candidates or what actions federal, state, or private payers for healthcare treatment and services may take in response to any such healthcare reform proposals or legislation. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures reforms may prevent or limit its ability to generate revenue, attain profitability or commercialize its product candidates, especially in light of Savara s plans to price its product candidates at a high level.

Furthermore, Savara expects that healthcare reform measures that may be adopted in the future, including the possible repeal and replacement of the Affordable Care Act, which the Trump administration has stated is a priority, are unpredictable, and the potential impact on its operations and financial position is uncertain, but may result in more rigorous coverage criteria, lower reimbursement, and additional downward pressure on the price Savara may receive for approved product. Any reduction in reimbursement from Medicare or other government-funded programs may result in a similar reduction in payments from private payers. The implementation of cost containment measures or other healthcare reforms may prevent Savara from being able to generate revenue, attain profitability or commercialize its products, if approved.

Savara faces potential product liability exposure and, if successful claims are brought against it, Savara may incur substantial liability for a product or product candidate and may have to limit its commercialization. In the future, Savara anticipates that it will need to obtain additional or increased product liability insurance coverage and it is uncertain whether such increased or additional insurance coverage can be obtained on commercially reasonable terms, if at all.

Savara s business (in particular, the use of its product candidates in clinical studies and the sale of any products for which it obtains marketing approval) will expose Savara to product liability risks. Product liability claims might be brought against Savara by patients, healthcare providers, pharmaceutical companies or others selling or involved in the use of its products. If Savara cannot successfully defend themselves against any such claims, Savara will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for its products and loss of revenue;
- impairment of its business reputation;
- delays in enrolling patients to participate in its clinical studies;
- withdrawal of clinical study participants;
- a clinical hold, suspension or termination of a clinical study or amendments to a study design;
- significant costs of related litigation;

substantial monetary awards to patients or other claimants; and

the inability to commercialize its products and product candidates.

Savara maintains limited product liability insurance for its clinical studies, but its insurance coverage may not reimburse Savara or may not be sufficient to reimburse Savara for all expenses or losses it may suffer. Moreover, insurance coverage is becoming increasingly expensive and, in the future, Savara may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect it against losses.

Savara expects that it will expand its insurance coverage to include the sale of commercial products if it obtains marketing approval for any of its product candidates, but Savara may be unable to obtain product liability insurance on commercially acceptable terms or may not be able to maintain such insurance at a reasonable cost or in sufficient amounts to protect Savara against potential losses. Large judgments have been awarded in class

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action lawsuits based on drug products that had unanticipated side effects. A successful product liability claim or series of claims brought against Savara, if judgments exceed its insurance coverage, could decrease its cash and adversely affect its business.

Risks Related to the Combined Organization

In determining whether you should approve the merger, the issuance of shares of Mast common stock and other matters related to the merger, as the case may be, you should carefully read the following risk factors in addition to the risks described above.

The stock price of the combined company is expected to be volatile, and the market price of its common stock may drop following the merger.

The market price of the combined company s common stock following the merger could be subject to significant fluctuations following the merger. Market prices for securities of early-stage pharmaceutical, biotechnology and other life sciences companies have historically been particularly volatile. Some of the factors that may cause the market price of the common stock of the combined company to fluctuate include:

- the ability of the combined organization to obtain regulatory approvals for its product candidates, and delays or failures to obtain such approvals;
- failure of any of the combined organization s product candidates, if approved, to achieve commercial success;
- failure to maintain its existing third party license and supply agreements;
- failure by Savara or Mast or its licensors to prosecute, maintain, or enforce its intellectual property rights;
- changes in laws or regulations applicable to its product candidates;
- any inability to obtain adequate supply of its product candidates or the inability to do so at acceptable prices;
- adverse regulatory authority decisions;
- introduction of new products, services, or technologies by its competitors;
- failure to meet or exceed financial and development projections the combined company may provide to the public;

failure to meet or exceed the financial and development projections of the investment community;

if securities or industry analysts do not publish research or reports about its business, or if they issue an adverse or misleading opinions regarding its business and stock;

the perception of the pharmaceutical industry by the public, legislatures, regulators, and the investment community;

announcements of significant acquisitions, strategic partnerships, joint ventures, or capital commitments by the combined company or its competitors;

disputes or other developments relating to proprietary rights, including patents, litigation matters, and its ability to obtain patent protection for its technologies;

additions or departures of key personnel;

significant lawsuits, including patent or stockholder litigation;

changes in the market valuations of similar companies;

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general market or macroeconomic conditions;

sales of its common stock by the combined company or its stockholders in the future;

trading volume of its common stock.

announcements by commercial partners or competitors of new commercial products, clinical progress or the lack thereof, significant contracts, commercial relationships or capital commitments;

adverse publicity relating to the cystic fibrosis market generally, including with respect to other products and potential products in such markets;

the introduction of technological innovations or new therapies that compete with potential products of the combined organization;

changes in the structure of health care payment systems; and

period-to-period fluctuations in the combined organization s financial results.

Moreover, the stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of individual companies. These broad market fluctuations may also adversely affect the trading price of the combined organization s common stock.

In the past, following periods of volatility in the market price of a company s securities, stockholders have often instituted class action securities litigation against those companies. Such litigation, if instituted, could result in substantial costs and diversion of management attention and resources, which could significantly harm the combined organization s profitability and reputation.

The combined organization will incur costs and demands upon management as a result of complying with the laws and regulations affecting public companies.

The combined organization will incur significant legal, accounting and other expenses that Savara did not incur as a private company, including costs associated with public company reporting requirements. The combined organization will also incur costs associated with corporate governance requirements, including requirements under the Sarbanes-Oxley Act, as well as new rules implemented by the SEC and the NYSE MKT. These rules and regulations are expected to increase the combined organization s legal and financial compliance costs and to make some activities more time-consuming and costly. For example, the combined organization s management team will consist of certain officers of Savara prior to the merger, some of whom have not previously managed and operated a public company. These officers and other personnel will need to devote substantial time to gaining expertise regarding operations as a public company and compliance with applicable laws and regulations. These rules and regulations may also make it difficult and expensive for the combined organization to obtain directors and officers liability insurance. As a result, it may be more difficult for the combined organization to attract and retain qualified individuals to serve on the

combined organization s board of directors or as executive officers of the combined organization, which may adversely affect investor confidence in the combined organization and could cause the combined organization s business or stock price to suffer.

The combined company does not expect to pay any cash dividends in the foreseeable future.

The combined organization expects to retain its future earnings to fund the development and growth of the combined organization s business. As a result, capital appreciation, if any, of the common stock of the combined organization will be your sole source of gain, if any, for the foreseeable future.

Future sales of shares by existing stockholders could cause the combined organization s stock price to decline.

If existing stockholders of Mast or Savara sell, or indicate an intention to sell, substantial amounts of the combined organization s common stock in the public market after legal restrictions on resale and the lock-up

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agreements discussed in this proxy statement/prospectus/information statement lapse, the trading price of the common stock of the combined organization could decline. Based on shares outstanding as of December 31, 2016 and shares expected to be issued upon completion of the merger, the combined organization is expected to have outstanding a total of approximately [ ] million shares of common stock (after giving effect to the proposed reverse stock split) immediately following the completion of the merger. Approximately [ ] million of such shares of common stock will be freely tradable, without restriction, in the public market. Approximately [ ] million of such shares will be held be subject to lock-up restrictions as described on page [ ]. If substantial additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of the combined organization common stock could decline.

Because the merger will likely result in an ownership change under Section 382 of the Code for Mast, Mast s pre-merger net operating loss carryforwards and certain other tax attributes will be subject to limitation. The net operating loss carryforwards and certain other tax attributes of Savara and of the combined company may also be subject to limitations as a result of ownership changes.

If a corporation undergoes an ownership change within the meaning of Section 382 of the Code, the corporation s net operating loss carryforwards and certain other tax attributes arising from before the ownership change are subject to limitations on use after the ownership change. In general, an ownership change occurs if there is a cumulative change in the corporation s equity ownership by certain stockholders that exceeds fifty percentage points over a rolling three-year period. Similar rules may apply under state tax laws. The merger will likely result in an ownership change for Mast and, accordingly, Mast s net operating loss carryforwards and certain other tax attributes will be subject to limitations on their use after the merger. The merger may also result in an ownership change for Savara, in which case, Savara s net operating loss carryforwards and certain other tax attributes would also be subject to limitations. Additional ownership changes in the future could result in additional limitations on Mast s, Savara s and the combined organization s net operating loss carryforwards. Consequently, even if the combined organization achieves profitability, it may not be able to utilize a material portion of Mast s, Savara s or the combined organization s net operating loss carryforwards and other tax attributes, which could have a material adverse effect on cash flow and results of operations.

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CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING STATEMENTS

This proxy statement/prospectus/information statement and the documents incorporated by reference into this proxy statement/prospectus/information statement contain forward-looking statements. These forward-looking statements are based on current expectations and beliefs and involve numerous risks and uncertainties that could cause actual results to differ materially from expectations. These forward-looking statements should not be relied upon as predictions of future events as Mast and Savara cannot assure you that the events or circumstances reflected in these statements will be achieved or will occur. You can identify forward-looking statements by the use of forward-looking terminology including believes, expects, may, will, should, seeks, intends, plans, pro forma, estima or the negative of these words and phrases or other variations of these words and phrases or comparable terminology. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. For example, forward-looking statements include, but are not limited to statements about:

- the expected benefits of and potential value created by the merger for the stockholders of Mast and Savara;
- any statements of the plans, strategies and objectives of management for future operations, including the execution and timing of integration plans;
- likelihood of the satisfaction of certain conditions to the completion of the merger and whether and when the merger will be consummated;
- statements of the plans, strategies and objectives of management with respect to the approval and closing of the merger, and the ability of Mast and Savara to solicit a sufficient number of proxies or written consents, as applicable, to approve matters related to the consummation of the merger;
- any statements concerning proposed new products, services or developments;
- any statements regarding future economic conditions or performance; and
- statements of belief and any statement of assumptions underlying any of the foregoing.

For a discussion of the factors that may cause Mast, Savara or the combined organization s actual results, performance or achievements to differ materially from any future results, performance or achievements expressed or implied in such forward-looking statements, or for a discussion of risk associated with the ability of Mast and Savara to complete the merger and the effect of the merger on the business of Mast, Savara and the combined organization, see Risk Factors beginning on page [ ].

Additional factors that could cause actual results to differ materially from those expressed in the forward-looking statements are discussed in reports filed with the SEC by Mast. See Where You Can Find More Information beginning on page [ ].

If any of these risks or uncertainties materializes or any of these assumptions proves incorrect, the results of Mast, Savara or the combined organization could differ materially from the forward-looking statements. All forward-looking statements in this proxy statement/prospectus/information statement are current only as of the date on which the statements were made. Mast and Savara do not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any statement is made or to reflect the occurrence of unanticipated events.

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THE SPECIAL MEETING OF MAST STOCKHOLDERS

Date, Time and Place

The special meeting of Mast stockholders will be held on [ ], 2017, at 3611 Valley Center Drive, Suite 500, San Diego, California 92130 commencing at local time. Mast is sending this proxy statement/prospectus/information statement to its stockholders in connection with the solicitation of proxies by the Mast Board for use at the Mast special meeting and any adjournments or postponements of the special meeting. This proxy statement/prospectus/information statement is first being furnished to stockholders of Mast on or about [ ], 2017.

Purposes of the Mast Special Meeting

The purposes of the Mast special meeting are:

1. To consider and vote upon a proposal to approve the merger and the issuance of Mast common stock in the merger pursuant to the Agreement and Plan of Merger and Reorganization, dated as of January 6, 2017, by and among Mast, Merger Sub and Savara, a copy of which is attached as Annex A to this proxy statement/prospectus/information statement;

2. To approve the amendment and restatement of the amended and restated certificate of incorporation of Mast to effect a reverse stock split of Mast common stock, at a ratio of one new share for every [ ] shares outstanding, in the form attached as Annex D to this proxy statement/prospectus/information statement;

3. To approve the amendment and restatement of the amended and restated certificate of incorporation of Mast to change the name Mast Therapeutics, Inc. to Savara Inc. in the form attached as Annex D to this proxy statement/prospectus/information statement;

4. To consider and vote upon a proposal to approve, on a non-binding advisory vote basis, compensation that will or may become payable by Mast to its named executive officers in connection with the merger;

5. To consider and vote upon an adjournment of the Mast special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Mast Proposal Nos. 1, 2, 3 and 4; and

6. To transact such other business as may properly come before the Mast special meeting or any adjournment or postponement thereof.

Recommendation of the Mast Board

The Mast Board has determined and believes that the merger and the issuance of shares of Mast common stock pursuant to the merger is in the best interests of, Mast and its stockholders and has approved such items. The Mast Board recommends that Mast stockholders vote FOR Mast Proposal No. 1 to approve the merger and the issuance of shares of Mast common stock in the merger.

The Mast Board has determined and believes that it is advisable to, and in the best interests of, Mast and its stockholders to approve the amendment and restatement of the amended and restated certificate of incorporation of Mast effecting the proposed 1-for-[ ] reverse stock split, as described in this proxy statement/prospectus/information statement. The Mast Board recommends that Mast stockholders vote FOR Mast Proposal No. 2 to approve the amendment and restatement of the amended and restated certificate of incorporation of Mast effecting the proposed

1-for-[ ] reverse stock split, as described in this proxy statement/prospectus/information statement.

The Mast Board has determined and believes that the amendment and restatement of the amended and restated certificate of incorporation of Mast to change the name of Mast to Savara Inc. is advisable to, and in the best interests of, Mast and its stockholders and has approved such name change. The Mast Board recommends that Mast stockholders vote FOR Mast Proposal No. 3 to approve the name change.

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The Mast Board has determined and believes that the compensation that will or may become payable by Mast to its named executive officers in connection with the merger is appropriate, and accordingly recommends that the Mast stockholders vote FOR Mast Proposal No. 4 to approve, on a non-binding advisory vote basis, such compensation.

The Mast Board has determined and believes that adjourning the Mast special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Mast Proposal Nos. 1, 2, 3 and 4 is advisable to, and in the best interests of, Mast and its stockholders and has approved and adopted the proposal. The Mast Board recommends that Mast stockholders vote FOR Mast Proposal No. 5 to adjourn the Mast special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Mast Proposal Nos. 1, 2, 3 and 4.

Record Date and Voting Power

Only holders of record of Mast common stock at the close of business on the record date, [ ], 2017, are entitled to notice of, and to vote at, the Mast special meeting. At the close of business on the record date, shares of Mast common stock were issued and outstanding. Each share of Mast common stock entitles the holder thereof to one vote on each matter submitted for stockholder approval. See the section entitled Principal Stockholders of Mast in this proxy statement/prospectus/information statement for information regarding persons known to the management of Mast to be the beneficial owners of more than 5% of the outstanding shares of Mast common stock.

Voting and Revocation of Proxies

The proxy accompanying this proxy statement/prospectus/information statement is solicited on behalf of the Mast Board for use at the Mast special meeting.

If you are a stockholder of record of Mast as of the record date referred to above, you may vote in person at the Mast special meeting or vote by proxy using the enclosed proxy card. Whether or not you plan to attend the Mast special meeting, Mast urges you to vote by proxy to ensure your vote is counted. You may still attend the Mast special meeting and vote in person if you have already voted by proxy. As a stockholder of record, you have the right:

- to vote in person, come to the Mast special meeting and Mast will give you a ballot when you arrive.
- to vote using the proxy card, simply mark, sign and date your proxy card and return it promptly in the postage-paid envelope provided. If you return your signed proxy card to Mast before the Mast special meeting, Mast will vote your shares as you direct.
- to vote on the Internet, go to the website on the proxy card or voting instruction form to complete an electronic proxy card. You will be asked to provide the company number and control number from the enclosed proxy card. Your vote must be received by [ ], 2017, Pacific Time to be counted.

If your Mast shares are held by your broker as your nominee, that is, in street name, the enclosed voting instruction card is sent by the institution that holds your shares. Please follow the instructions included on that proxy card regarding how to instruct your broker to vote your Mast shares. If you do not give instructions to your broker, your broker can vote your Mast shares with respect to discretionary items but not with respect to non-discretionary items. Discretionary items are proposals considered routine under the rules of the NYSE MKT on which your broker may vote shares held in street name in the absence of your voting instructions. On non-discretionary items for which you

do not give your broker instructions, the Mast shares will be treated as broker non-votes. It is anticipated that Mast Proposal No. 1 will be a non-discretionary item.

All properly executed proxies that are not revoked will be voted at the Mast special meeting and at any adjournments or postponements of the Mast special meeting in accordance with the instructions contained in the

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proxy. If a holder of Mast common stock executes and returns a proxy and does not specify otherwise, the shares represented by that proxy will be voted FOR Mast Proposal No. 1 to approve the merger and the issuance of shares of Mast common stock in the merger; FOR Mast Proposal No. 2 to approve the amendment and restated of the amended and restated certificate of incorporation of Mast effecting the proposed 1-for-[ ] reverse stock split; FOR Mast Proposal No. 3 to approve the amendment and restated of the amended and restated certificate of incorporation of Mast to change the name of Mast Therapeutics, Inc. to Savara Inc. ; FOR Mast Proposal No. 4 to approve, on a non-binding advisory vote basis, compensation that will or may become payable by Mast to its named executive officers in connection with the merger; and FOR Mast Proposal No. 5 to adjourn the Mast special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Mast Proposal Nos. 1, 2, 3 and 4 in accordance with the recommendation of the Mast Board.

Mast stockholders of record, other than those Mast stockholders who have executed support agreements, may change their vote at any time before their proxy is voted at the Mast special meeting in one of three ways. First, a stockholder of record of Mast can send a written notice to the Secretary of Mast stating that the stockholder would like to revoke its proxy. Second, a stockholder of record of Mast can submit new proxy instructions either on a new proxy card or via the Internet or telephone. Third, a stockholder of record of Mast can attend the Mast special meeting and vote in person. Attendance alone will not revoke a proxy. If a Mast stockholder of record or a stockholder who owns Mast shares in street name has instructed a broker to vote its shares of Mast common stock, the stockholder must follow directions received from its broker to change those instructions.

Required Vote

The presence, in person or represented by proxy, at the Mast special meeting of the holders of a majority of the shares of Mast common stock outstanding and entitled to vote at the Mast special meeting is necessary to constitute a quorum at the meeting. Abstentions and broker non-votes will be counted towards a quorum. Approval of Mast Proposal Nos. 1, 4 and 5 requires the affirmative vote of the holders of a majority of the shares of Mast common stock having voting power present in person or represented by proxy at the Mast special meeting. Approval of Mast Proposal Nos. 2 and 3 requires the affirmative vote of holders of a majority of the Mast common stock having voting power outstanding on the record date for the Mast special meeting. **Each of Proposal Nos. 1, 2 and 3 are conditioned upon each other. Therefore, the merger cannot be consummated without the approval of Proposal Nos. 1, 2 and 3.**

Votes will be counted by the inspector of election appointed for the meeting, who will separately count FOR and AGAINST votes, abstentions and broker non-votes. Abstentions will be counted towards the vote total for each proposal and will have the same effect as AGAINST votes. Broker non-votes will have the same effect as AGAINST votes for Mast Proposal Nos. 2 and 3. For Mast Proposal Nos. 1, 4 and 5, broker non-votes will have no effect and will not be counted towards the vote total, but will be used to determine whether a quorum is present at the Mast special meeting.

As of December 31, 2016, the directors and executive officers of Mast owned less than one percent of the outstanding shares of Mast common stock entitled to vote at the Mast special meeting. The directors and executive officers of Mast owning these shares are subject to voting agreements. Each stockholder that entered into a voting agreement has agreed to vote all shares of Mast common stock owned such stockholder as of the record date in favor of the merger and the issuance of Mast common stock in the merger pursuant to the Merger Agreement, the adoption of the Merger Agreement if submitted for adoption, the approval of any proposal to adjourn or postpone the meeting to a later date, if there are not sufficient votes for the merger and the issuance of Mast common stock in the merger pursuant to the Merger Agreement on the date on which such meeting is held, and any other matter necessary to consummate the transactions contemplated by the Merger Agreement that are considered and voted upon by Mast s stockholders and against any acquisition proposal, as defined in the Merger Agreement. As of September 30, 2016, Mast is not aware of

any affiliate of Savara owning any shares of Mast common stock entitled to vote at the Mast special meeting.

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Solicitation of Proxies

In addition to solicitation by mail, the directors, officers, employees and agents of Mast may solicit proxies from Mast stockholders by personal interview, telephone, telegram or otherwise. Arrangements will also be made with brokerage firms and other custodians, nominees and fiduciaries who are record holders of Mast common stock for the forwarding of solicitation materials to the beneficial owners of Mast common stock. Mast will reimburse these brokers, custodians, nominees and fiduciaries for the reasonable out-of-pocket expenses they incur in connection with the forwarding of solicitation materials. Mast has retained Advantage Proxy to assist it in soliciting proxies using the means referred to above. Mast will pay the fees of Advantage Proxy, which Mast expects to be approximately $10,000, plus reimbursement of out-of-pocket expenses.

Other Matters

As of the date of this proxy statement/prospectus/information statement, the Mast Board does not know of any business to be presented at the Mast special meeting other than as set forth in the notice accompanying this proxy statement/prospectus/information statement. If any other matters should properly come before the Mast special meeting, it is intended that the shares represented by proxies will be voted with respect to such matters in accordance with the judgment of the persons voting the proxies.

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THE MERGER

This section and the section entitled The Merger Agreement in this proxy statement/prospectus/information statement describe the material aspects of the merger, including the Merger Agreement. While Mast and Savara believe that this description covers the material terms of the merger and the Merger Agreement, it may not contain all of the information that is important to you. You should read carefully this entire proxy statement/prospectus/information statement for a more complete understanding of the merger and the Merger Agreement, including the Merger Agreement, and the other documents to which you are referred herein. See the section entitled Where You Can Find More Information in this proxy statement/prospectus/information statement.

Background of the Merger

Mast is currently focused on the development of its lead product candidate, AIR001. Mast had previously devoted substantially all of its research, development and clinical efforts and financial resources toward the development of vepoloxamer. Vepoloxamer was previously in clinical development in sickle cell disease and heart failure, but following negative top-line results of the Phase 3 study in sickle cell disease known as EPIC in September 2016, Mast determined to discontinue clinical development of vepoloxamer and wind down all of the clinical studies.

As a consequence of the negative results from the vepoloxamer trial and concerns over the difficulty in raising additional funds to further development of AIR001, the Mast Board began evaluating its strategic opportunities to maximize stockholder value, including the possibility of seeking a merger, a sale of the company or all or some of its assets, and/or a liquidation. Mast s management provided the Mast Board with management s preliminary assessment of a variety of strategic alternatives that Mast could pursue to maximize stockholder value, including engaging in a reverse merger process, a sale of some or all of Mast s assets, or distributing some or all of Mast s remaining cash through either a dividend or a liquidation of Mast.

On September 20, 2016, Mast announced its intent to implement significant cost-saving measures to its vepoloxamer development programs immediately and to continue development of AIR001, in particular by supporting ongoing, investigator-sponsored Phase 2 clinical studies of AIR001 in heart failure with preserved ejection fraction.

On September 21, 2016, the Mast Board held a meeting with representatives of management and Mast s corporate counsel, DLA Piper LLP (US) (DLA) in attendance. DLA was generally invited to attend all Mast Board and Mast Board committee meetings. After a representative from DLA described the Mast Board s fiduciary duties in connection with a strategic process, the Mast Board discussed Mast s strategic options. Brian Culley, Mast s Chief Executive Officer, led a discussion regarding business strategy and planning, cash management, potential strategic and financing opportunities, and NYSE MKT continued listing requirements. Mr. Culley reviewed potential timing and financial implications of a hypothetical reverse merger transaction with a private company, for planning purposes, as well as an overview regarding various potential transactions being explored, primarily with biotechnology companies.

On September 23, 2016, the Mast Board held a telephonic meeting with representatives of management and DLA in attendance. Mr. Culley led a discussion regarding Mast s business strategy and planning, including proposing the termination of the vepoloxamer program and focus on development of AIR001 program, significant reductions in operating expenses and potential financing and partnering opportunities. The Mast Board discussed public communication of Mast s proposed focus and strategy.

On September 25, 2016, the Mast Board held a telephonic meeting with representatives of management and DLA in attendance. Management discussed a revised forecast and budget assuming the termination of all vepoloxamer program and related operating expenses. The Mast Board approved the revised forecast, including

the corresponding reduction in workforce. Mr. Culley led a discussion regarding Mast s alternatives for raising capital to fund operations, including its AIR001 program.

On September 26, 2016, Mast confirmed its previously announced plans to prioritize its AIR001 program with continued support for three separate, ongoing, investigator-sponsored Phase 2 clinical studies of AIR001 and suspend further research or development of its vepoloxamer program and announced that it was initiating a process to evaluate partnership opportunities for its assets.

Beginning in September 2016 and continuing into December 2016, Mast conducted a process of identifying and evaluating potential strategic combinations. In its review, Mast focused primarily on biotechnology companies possessing (i) product development candidates with the potential for significant value appreciation, (ii) resources sufficient to achieve potentially meaningful development milestones, including resources that might be obtained through financing activities consummated prior to the effectiveness of a combination with Mast as well as the resources that would result from a combination with Mast, (iii) an ability to enter into an agreement in the near-term for a combination with a public company and thereafter proceed in an orderly manner toward implementing the combination, and (iv) a management team with the breadth and skills to accomplish the foregoing. Working with Roth Capital Partners, LLC (Roth), Mast s financial advisor, Mast identified and screened approximately 35 companies and set management calls and meetings with 32 companies. These activities resulted in indications of interest in a potential combination with 7 companies. In evaluating these indications of interest, including in certain cases through discussions and diligence activities with potential counterparties (see in this regard the discussion below with respect to Mast s engagement with Parties A, B, C, D, E, G and I), Mast ultimately concluded in each instance (except for Savara) that (x) one or more desired elements were missing from a potential combination, (y) the terms expected to be available to Mast and its stockholders in a potential combination, including as represented by the potential share of the combined company that might be owned by the pre-combination Mast stockholders immediately following a combination and any concurrent financing, would likely not maximize value for the pre-combination Mast stockholders because the parties making the proposals did not adequately value Mast s AIR001 candidate, and/or (z) Mast should pursue a combination with Savara to the exclusion of other possibilities. In the course of its process, Savara was the only party with which Mast ultimately reached a mutual understanding on deal terms, including the potential share of the combined company that would be owned by the pre-combination Mast stockholders immediately following a combination and any concurrent financing, and moved forward with negotiating a definitive merger agreement.

On September 29, 2016, Mr. Culley met informally with a representative of a potential counterparty to a business combination transaction. On September 30, 2016, Mr. Culley exchanged messages with representatives of such party regarding a potential business combination. On October 5, 2016, Mr. Culley met informally with a representative of such counterparty. Such counterparty indicated that it would not pursue a business combination at this time.

On September 30, 2016, Mr. Culley contacted the chief executive officer of Party A. The parties had previously executed a confidentiality agreement on February 25, 2016. The parties discussed their respective companies and the potential for a business combination. The parties agreed to have a formal meeting at Party A s offices.

On October 5, 2016, Mr. Culley met informally with a representative of a potential counterparty to a business combination transaction. Following discussion, the representative indicated that the counterparty was not interested in pursuing a combination with Mast at such time.

On October 6, 2016, Mr. Culley received a telephone call from a representative of Party A during which the parties discussed, among other things, their respective companies and the potential for a business combination. Also on October 6, 2016, Mr. Culley met informally with a representative of a potential counterparty to a business

combination transaction. Following discussion, the representative indicated that the counterparty was not interested in pursuing a combination with Mast at such time.

On October 10, 2016, Brandi Roberts, Mast s Chief Financial Officer, met informally with the chairman of the board of directors of Party B. They discussed, among other things, updates on their respective businesses. The representative of Party B expressed an interest in pursuing a business combination and provided Mast with information relating to Party B s business.

On October 13, 2016, Mr. Culley discussed with representatives of Roth potential counterparties to a business combination. The parties discussed the current interest and status of ongoing discussions.

On October 14, 2016, Mr. Culley and Ms. Roberts met informally with the chairman of the board of directors of Party B. They discussed, among other things, updates on their respective businesses and mutual interest in a potential business combination. Also on October 14, 2016, Mr. Culley made a telephone call to a representative of a potential counterparty to a business combination transaction. Following discussion, the representative indicated that the counterparty was not interested in pursuing a combination with Mast at such time.

On October 17 to October 18, 2016, representatives of Mast met with representatives of Party A at Party A s offices. The parties discussed their respective businesses, strategic plans for Party A s clinical studies and a potential business combination. Representatives of Mast also toured Party A s facilities and were presented the opportunity to ask follow-up diligence questions. Following the meeting, the parties exchanged messages and calls continuing to discuss matters relating to their respective businesses and a potential business combination.

On October 18, 2016, the Mast Board held a telephonic meeting with representatives of management and DLA present. Mr. Culley provided an update regarding the nature and status of various companies being explored as possible counterparties for a potential combination with Mast, including Party A and Party B, as well as the expressed interest by certain possible counterparties in such a combination. The Mast Board also discussed the reduction in workforce, which reduction had previously discussed and approved on September 25, 2016, and approved management s proposed timing for additional reductions.

Also on October 18, 2016, Mr. Culley was provided an introduction to Party D. Party D provided to Mast a proposed confidentiality agreement in order to conduct diligence into a potential businession combination transaction.

On October 24, 2016, representatives of Mast hosted a representative of Party A at Mast s offices to conduct due diligence for a potential business combination.

Also on October 24, 2016, Mast executed an engagement letter with Roth as its exclusive financial advisor in connection with a potential merger, reorganization or other business combination transaction or potential alternatives thereto.

On October 24, 2016, Mr. Culley met informally with a representative of a potential counterparty to a business combination transaction. Following discussion, the representative indicated that the counterparty was not interested in pursuing a combination with Mast at such time.

From October 20 to October 26, 2016, representatives of Mast exchanged a series of messages and calls with representatives of Party C has discussions via telephone conference during which the parties discussed, among other things, updates on their respective businesses and mutual interest in a potential business combination. On October 27, 2016, Mast entered into a mutual confidentiality agreement with Party C and provided preliminary diligence information to Party C.

On October 27, 2016, Mr. Culley was provided an introduction to Party E. The parties exchanged messages and arranged for a teleconference the following day. On October 28, 2016, Mr. Culley and representatives of Party E had discussions via telephone conference during which the parties discussed, among other things, updates on their respective businesses and mutual interest in a potential business combination.

On October 28, 2016, representatives of Mast met with representatives of Party B at Party B s offices. The parties discussed their respective businesses and a potential business combination. Representatives of Mast also toured Party B s facilities and were offered the opportunity to ask follow-up diligence questions.

Also on October 28, 2016, Mast entered into a confidentiality agreement with Party D.

Also on October 28, 2016, Mr. Culley met informally with a representative of a potential counterparty to a business combination transaction. Following discussion, the representative indicated that the counterparty was not interested in pursuing a combination with Mast at such time. In addition, on October 28, 2016, Mr. Culley made a telephone call to a representative of a potential counterparty to a business combination transaction. Following discussion, the representative indicated that the counterparty was not interested in pursuing a combination with Mast at such time.

On October 31, 2016, Mast announced a workforce reduction as part of its previously described strategic focus on AIR001 and plan to significantly reduce operating costs, which reduction had been approved by the Mast Board on October 18, 2016. The reduction brought the aggregate reductions since the beginning of October to approximately 38% of Mast s workforce. Mast also announced plans to implement additional cost control measures in the fourth quarter of 2016 to further reduce its expenditures.

On November 1, 2016, Mr. Culley and a representative of Party C had discussions via telephone during which the parties discussed, among other things, updates on their respective businesses and mutual interest in a potential business combination. Also, on November 1 and November 2, 2016, Mr. Culley held a series of telephone calls with a representative of a potential counterparty to a business combination transaction. Following discussion, the representative indicated that the counterparty was not interested in pursuing a combination with Mast at such time.

On November 1, 2016, representatives of Party A notified representatives of Mast that Party A was no longer interested in pursuing a potential business combination with Mast at this time.

On November 1, 2016, Mast entered into a mutual confidentiality agreement with Party E and provided preliminary diligence information to Party E.

On November 3, 2016, the Mast Board held a telephonic meeting with representatives of management and DLA present. Mr. Culley provided an update on the ongoing diligence and discussions with possible counterparties for a potential combination. Also on November 3, 2016, representatives of Roth, on behalf of Mast, had discussions via telephone with representatives of Party B regarding a proposal for a business combination with Mast.

On November 4, 2016, representatives of Mast met with representatives of Party E at Mast s offices. The parties discussed their respective businesses, strategic plans for Party E s clinical studies and a potential business combination. Later that day, Mr. Culley met with representatives of Party B to conduct additional due diligence.

Also on November 4, 2016, Mr. Culley exchanged a series of messages and calls with representatives of Party D discussing, among other things, updates on the respective companies businesses and conducting further due diligence.

In addition, on November 4, 2016, representatives of Roth provided representatives of Mast a preliminary business overview of Party F.

On November 7, 2016, Mr. Culley and a representative of Party E had discussions via telephone during which the parties discussed, among other things, updates on their respective businesses and mutual interest in a potential business combination. Also on November 7, 2016, Mr. Culley indicated to Party D that, at this time,

based on a review of Party D s business, Mr. Culley did not believe that Party D met the Mast Board s criteria of a potential counterparty to a potential business combination, however, the parties agreed to meet informally to further discuss a potential combination.

On November 8 to November 9, 2016, representatives of Mast met with representatives of Party E at Party E s offices. The parties discussed their respective businesses, strategic plans for Party E s clinical studies and a potential business combination. Representatives of Mast also toured Party E s offices and were offered the opportunity to ask follow-up diligence questions.

On November 9, 2016, representatives of Mast met with representatives of Party E. The parties discussed follow up diligence questions from the previous meeting as well as a potential business combination. Mr. Culley informed Party E that the Mast Board would review any formal proposal presented. Following the meeting, on November 10, 2016, Mr. Culley spoke with representatives of Party E, discussing additional matters relating to their respective businesses.

On November 11, 2016, Mr. Culley spoke with a representative of Canaccord, Savara s financial advisor, to discuss Savara as a potential counterparty to a business combination with Mast. Also on November 11, 2016, Mr. Culley received a written indication of interest from Party E. Mr. Culley promptly communicated receipt of the proposal to the Mast Board.

On November 15, 2016, Mr. Culley had discussions via telephone with representatives of Party C during which the parties discussed, among other things, Party C s interest in submitting an indication of interest for a business combination with Mast. Mr. Culley indicated that the Mast Board would review any offer formally submitted. Following the call, Party C submitted a non-binding preliminary indication of interest to Mr. Culley. Mr. Culley promptly communicated receipt of the proposal to the Mast Board. Also on November 15, 2016, Mr. Culley met informally with a representative of Party B during which the parties discussed, among other things, a potential business combination.

On November 16, 2016, the Savara Board held a meeting with representatives of management, Canaccord and Wilson Sonsini Goodrich & Rosati, P.C. (WSGR) present. Management provided an overview of the potential benefits and risks of a transaction with Mast as well as potential financing transactions. As a result of this meeting, the Savara Board authorized management to engage in discussions with Mast and to conduct due diligence. Following the Savara Board meeting, Mast entered into a mutual confidentiality agreement with Savara.

In addition, on November 16, 2016, Party G submitted a non-binding preliminary indication of interest to Mr. Culley. Mr. Culley promptly communicated receipt of the proposal to the Mast Board. Also on November 16, 2016, Mast entered into a mutual confidentiality agreement with Party B and provided preliminary diligence information to Party B.

On November 17 and November 18, 2016, Mr. Culley and Robert Neville, Chief Executive Officer of Savara, held a series of telephone meetings to discuss their respective businesses and Savara s interest in potential business combination. Mr. Culley indicated that he would present any formal proposal to the Mast Board.

On November 17 and 18, 2016, representatives of Mast exchanged various emails and calls with Party F regarding, among other things, updates and overviews of the respective parties businesses, due diligence matters, and a potential business combination.

On November 18, 2016, Savara submitted a non-binding preliminary indication of interest to Mast through Canaccord.

On November 18, 2016, the Mast Board held a telephonic meeting with representatives of management, Roth and DLA present. Mr. Culley provided an update on the ongoing diligence and discussions with possible

counterparties for a potential combination, as well as the interest expressed by certain possible counterparties in such a combination. Mr. Culley promptly communicated receipt of the proposal to the Mast Board. Also on November 18, 2016, Mast entered into a confidentiality agreement with Party G.

On November 21, 2016, Mast announced that it had received several written indications of interest in a reverse merger business combination and was continuing to review its strategic alternatives to maximize stockholder value. Following the announcement, a representative of Roth, at the instruction of the Mast Board, sent a bid process letter and a draft merger agreement to Savara and Parties B, C, E, F, G and two other parties, each of whom had expressed an interest in a business combination with Mast. Roth s letter requested any bids be submitted by November 28, 2016. Following circulation of the bid process letter and draft merger agreement, a representative of Mast and a representative of Party G discussed certain due diligence information, including a discussion of their respective businesses, backgrounds and experience. In addition, following circulation of the bid process letter, representatives of Party F notified representatives of Mast that Party F was not interested in pursuing a business combination with Mast at this time.

Also on November 21, 2016, representatives of Mast met at Mast s offices with representatives of Party E in order to conduct additional diligence for a potential business combination. Later on November 21, 2016, Mast and Party G provided access to their respective virtual data rooms containing certain business and financial data to the other party. Also on November 21, 2016, Mast and Savara provided access to their respective virtual data rooms containing certain business and financial data to the other party. In addition, on November 21, 2016, Mast provided access of its virtual data rooms containing certain business and financial data to Party B.

On November 22, 2016, representatives of Mast held a due diligence call with representatives of Party E, discussing their respective businesses, and a potential business combination.

Also on November 22, 2016, representatives of Mast met at Mast s offices with representatives of Party G in order to conduct additional diligence for a potential business combination. In addition, on November 22, 2016, Mr. Culley held a series of telephonic conversations with representatives of Party G, during which the parties discussed, among other thing, the bid process and the potential business combination transaction. Mr. Culley indicated that he would present any formal proposal to the Mast Board.

On November 22, 2016, Mr. Culley was provided an introduction to representatives of Party H. The parties exchanged messages regarding preliminary due diligence and on November 23, 2016, Mast entered into a confidentiality agreement with Party H.

On November 23, 2016, Mr. Culley and Mr. Neville discussed the bid process and a potential business combination.

On November 28, 2016, Mr. Neville submitted a response letter to Mast through Roth detailing certain discussion items with respect to the draft merger agreement. Following submission of Savara s proposal, representatives of Savara and representatives of Mast exchanged messages on November 28, 2016 to November 29, 2016 regarding due diligence matters with respect to each respective company s product candidates. Also on November 28, 2016, representatives of Parties C, E and G submitted a proposal for a business combination to representatives of Roth which was promptly transmitted to representatives of Mast. Mr. Culley promptly transmitted the proposals to the Mast Board.

In addition, on November 28, 2016, representatives of Mast met with representatives of Party H at Mast s offices. The parties discussed their respective businesses and a potential business combination. Following the meeting, Mr. Culley had discussions with a representative with Party H where they discussed the bid process and follow up diligence questions. At this point, management instructed Roth to provide Party H with the bid process letter.

On November 29, 2016, representatives of Party B submitted a proposal for a business combination to representatives of Mast and Roth. Party B then provided access to its virtual data rooms containing certain business and financial data to Mast. Following receipt of the proposal, representatives of Mast and representatives of Roth discussed the indications of interest received to date. Following the discussion, Mr. Culley promptly communicated the indication of interest to the Mast Board and arranged for a telephonic meeting the following day to discuss Mast s response.

On November 30, 2016, representatives of Mast met with representatives of Savara at Mast s offices to conduct additional due diligence relating to the respective companies businesses, including the status of Savara s clinical studies for its product candidates, Savara s capital structure, Mast s lead product candidate, and a potential business combination. Following the meeting, the Mast Board held a telephonic meeting, with management, Roth and DLA present. After a representative from DLA described the Mast Board s fiduciary duties in connection with various indications of interest, the Mast Board discussed each proposal in detail. Management indicated that it was still in discussions with other possible counterparties. Following review of the proposals received to date and management s discussion of the ongoing process, the Mast Board determined that the current proposals did not adequately reflect the value of Mast and directed management to work with Roth in responding to the proposals and to determine whether the possible counterparties would improve their respective proposals. Following the meeting, Roth communicated with each party who submitted an indication of interest that the Mast Board had reviewed all proposals and determined that the submitted proposals did not adequately reflect the value of Mast and invited the parties to submit improved proposals for a business combination by December 5, 2016. In addition, Roth informed management that they submitted the bid process letter to Party I, who Roth believed may have an interest in a business combination with Mast.

Also on November 30, 2016, representatives of Mast met with representatives of Party E to discuss the clinical operations of the respective companies.

On December 1, 2016, representatives of Mast held a due diligence meeting with representatives of Party E to discuss, among other things and their respective businesses, a potential business combination. Following the meeting, on December 2, 2016, representatives of Mast, including Roth, exchanged messages with representatives of Party E regarding the status of the diligence process as well as a discussion of the bid process. Party E indicated it would review the potential business combination internally and determine whether it would submit an improved proposal for a business combination.

On December 1, 2016, Party D submitted to Mr. Culley, an unsolicited proposal, which Mr. Culley communicated to and discussed with the Chair of the Mast Board and Roth, concluding that Party D s proposal did not meet the criteria of the Mast Board. Also on December 1, 2016, Party I submitted to Mr. Culley a proposal. Following review, Mr. Culley indicated that Party I would need to improve its proposal for Mast to consider a business combination with Party I. Party I indicated that it would not improve its proposal at this time.

On December 3, 2016, representatives of Party B submitted to representatives of Mast, including Roth, an updated proposal. Mr. Culley promptly communicated the updated proposal to the Mast Board.

On December 5, 2016, Mr. Culley visited Savara s offices in Austin, Texas. Both Savara and Mast continued the due diligence relating to the respective companies businesses and programs, and discussed the potential merger terms, process and timing.

Also on December 5, 2016 representatives of Parties C, E, G and Savara submitted to representatives of Mast, including Roth, updated proposals. In addition, Savara submitted a draft exclusivity agreement and a revised response to the draft merger agreement. Later on December 5, 2016, Party D re-submitted to representatives of Mast its

unsolicited proposal previously submitted on December 1, 2016. Each proposal was promptly communicated to the Mast Board.

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On December 6, 2016, the Mast Board met, with representatives of management, Roth and DLA present, to discuss the status of the bid process. After a representative from DLA described the Mast Board s fiduciary duties in connection with evaluating the various indications of interest, the Mast Board discussed the proposals. At this time, the Mast Board formed a strategic transactions committee (the Committee), comprised of four independent directors, Matthew Pauls, Howard C. Dittrich, Peter Greenleaf and David A. Ramsay, to be kept apprised of developments and consulted between full board meetings and make recommendations as appropriate to the full board for its consideration. After reviewing all proposals received to date and discussing each in detail with management and Roth and considering Mast s limited resources and the value of proceeding expeditiously to an outcome, the Mast Board determined to proceed in discussions with two of the possible counterparties whose indications of interest they believed yielded the best opportunities for Mast stockholders to maximize value, Savara and Party G, and directed Roth and Mast s management to ask those parties to submit improved proposals for a business combination and to present company overviews to the Mast Board. Following the meeting, representatives of Mast, including Roth, communicated to each party who had submitted proposals of the Mast Board s determination, and communicated with Savara and Party G regarding their presentation to the Mast Board.

On December 8, 2016, representatives of Mast, including Roth and DLA, and representatives of Savara, including Canaccord and Savara s legal counsel, WSGR, exchanged messages regarding open issues for a possible business combination.

On December 9, 2016, Party G and Savara each separately presented their company overview to the Mast Board. Also on December 9, 2016, representatives of Mast, including Roth and DLA, received an unsolicited updated proposal for a business combination from Party E. After Savara s and Party G s respective presentations and after a representative from DLA described the Mast Board s fiduciary duties in connection with evaluating the proposals, the Mast Board discussed each proposal with members of management and representatives of Roth.

On December 12, 2016, WSGR provided comments to the draft merger agreement to DLA. From December 12 to December 13, 2016, DLA reviewed and revised the draft merger agreement. On December 13, 2016, DLA provided comments to the draft merger agreement to WSGR.

On December 12, 2016, the Committee held a telephonic meeting. After discussing the proposals, the Committee directed management and Roth to negotiate the terms of an exclusivity agreement with Savara. Following negotiation, representatives of Mast and Savara agreed to an exclusivity period expiring December 22, 2016. Mast and Savara entered into the exclusivity agreement on December 13, 2016. Following entry into the exclusivity agreement, Mast made available additional diligence material to Savara in its virtual data room.

From December 13, 2016 until the execution of the definitive merger agreement on January 6, 2017, the companies and their respective advisors exchanged numerous drafts of the merger agreement and numerous messages and calls regarding due diligence matters and engaged in negotiations and discussions regarding the terms and conditions of the merger agreement. Significant areas of negotiation included the scope of representations and warranties and interim operating covenants, the conditions to closing, the treatment of Mast and Savara outstanding equity instruments, required net cash at closing, the definition of net cash, and the amount and triggers for the possible reimbursement of expenses and the payment of termination fees.

Concurrent with these discussions, representatives of management of each of the companies, WSGR, DLA and the companies respective other representatives continued to have numerous discussions by teleconference to review and discuss, among other things, due diligence, the terms of the merger agreement and the timeline for the potential transaction.

On December 15, 2016, the Savara Board held a meeting with representatives of management and WSGR present. Management provided an update on the status of negotiations on the merger agreement and the results of

the due diligence investigation of Mast. The Savara Board provided guidance on key merger agreement terms and authorized Savara management to continue negotiations and due diligence with Mast.

On December 16, 2016, management from Mast and Savara and representatives of DLA and WSGR, exchanged messages regarding open issues in the merger agreement, including treatment of Mast s outstanding debt obligations, closing cash expectations and treatment of interim capital raising transactions, if any, by Savara and Mast. Also on December 16, 2016, representatives from Mast and Savara held a due diligence teleconference during which they discussed, among other thing, diligence relating to the respective parties clinical programs, financial background and corporate structure.

On December 18, 2016, WSGR provided comments to the draft merger agreement to DLA. From December 18 to December 23, 2016, DLA reviewed and revised the draft merger agreement.

From December 18 to December 20, 2016, management from Mast and Savara and representatives of DLA and WSGR participated in a series of discussions via teleconference to discuss and negotiate, among other things, terms relating to closing cash balances and projected interim expenses, the amount of termination fees and triggers for payment of such fees, financial and accounting issues, and treatment of outstanding equity instruments.

On December 22, 2016, the Committee held a telephonic meeting, with members of management and representatives from Roth and DLA present. The Committee discussed, among other things, the progress of negotiations with Savara, open issues and the potential timeline to execution of a definitive agreement. Following the discussion, the Committee authorized management to extend exclusivity with Savara until December 28, 2016. On December 23, 2016, Mast and Savara entered into an amendment to the exclusivity agreement extending exclusivity until December 28, 2016.

On December 23, 2016, DLA provided comments to the draft merger agreement to WSGR. From December 23 to December 28, 2016, Savara, Mast and their respective representatives continued to negotiate the terms of a definitive merger agreement and conducted various due diligence conference calls regarding the parties respective businesses.

On December 29, 2016, the Committee held a telephonic meeting, with members of management and representatives from Roth and DLA present. The Committee discussed, among other things, the progress of negotiations with Savara, open issues and potential timeline to execution of a definitive agreement. Following the discussion, the Committee authorized management to extend exclusivity with Savara until January 6, 2017. The Committee directed management to inform Savara that the Committee would not consider any further extensions of the exclusivity period. Following the meeting, Mast and Savara entered into a second amendment to the exclusivity agreement extending exclusivity until January 6, 2017.

Also on December 29, 2016, management from Mast and Savara and representatives of DLA and WSGR participated in a series of discussions to negotiate remaining open issues in the merger agreement and conduct additional due diligence relating to the parties respective intellectual property.

Also on December 29, 2016, Mast announced an additional workforce reduction as part of its previously described strategic focus on AIR001 and plan to significantly reduce operating costs.

On January 2, 2017, representatives of DLA and WSGR participated in a series of discussions via teleconference to discuss and negotiate remaining open issues in the merger agreement. The parties agreed to review the open items with their respective clients and participate in a call the following day to discuss the open issues.

On January 3, 2017, management from Mast and Savara and representatives of DLA and WSGR participated in a series of discussions via teleconference to discuss and negotiate remaining open issues in the merger agreement.

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On January 4, 2017, the Committee held a telephonic meeting, with members of management and representatives from Roth and DLA present. Prior to the meeting, the Committee received a marked copy of the current draft merger agreement reflecting changes from the last draft reviewed, drafts of the lock-up and voting agreements, and written summaries from representatives of Mast of due diligence on Savara. The Committee discussed, among other things, the progress of negotiations with Savara, open issues and potential timeline to execution of a definitive agreement.

On January 4, 2017, the Savara Board held a telephonic meeting with management and representatives of WSGR present to discuss the terms of the proposed transaction and the negotiated merger agreement, a copy of which had been distributed in advance of the meeting, and the developments since the previous draft and meeting. Management provided an update to the Savara Board on the results of its due diligence investigation of Mast. Management and legal counsel updated the Board on the negotiations with Mast since the previous meeting and reviewed the material terms of the merger agreement. The Savara Board also considered the factors described below under The Merger Recommendation of the Board; Reasons for the Merger , as well as the process of SEC review and the various risks, such as non-consummation of the merger, arising in connection with the proposed transaction. Following discussion, the Board unanimously (i) approved the merger agreement and consummation of the merger upon the terms and subject to the conditions set forth in the merger agreement, (ii) determined that the terms of the merger agreement and the transactions contemplated by the merger agreement, including the merger, are fair to, advisable and in the best interests of Savara and its stockholders, (iii) directed that the merger agreement be submitted to Savara s stockholders for adoption, and (iv) recommended that Savara stockholders adopt the merger agreement and approve the transactions contemplated by the merger agreement, including the merger. The Savara Board instructed management to finalize the transaction documents and enter into the merger agreement consistent with its instructions.

On January 5, 2017, management from Mast and Savara and representatives of DLA and WSGR exchanged messages to discuss and finalize the draft merger agreement.

Later on January 5, 2017, the Committee held a telephonic meeting, with members of management and representatives from Roth and DLA present. Prior to the meeting, the Committee received a marked copy of the current draft merger agreement reflecting changes from the last draft reviewed. The Committee discussed, among other things, the progress of negotiations with Savara, open issues and potential timeline to execution of a definitive agreement.

On January 6, 2017, the Committee held a telephonic meeting to discuss the terms of the proposed transaction and the fully negotiated merger agreement, a marked copy of which reflecting changes since the last draft reviewed had been distributed in advance of the meeting, and the developments since the previous draft and meeting. Together with management and Mast s external financial and legal advisors, the Committee reviewed the results of Roth s financial analysis and the terms of the proposed transaction. Representatives of DLA updated the Committee on the negotiations with Savara since the previous Committee meeting and reviewed with the Committee the material terms of the merger agreement. Representatives of Roth reviewed with the Committee Roth s financial analysis of the transaction and merger consideration, and later rendered to the Mast Board an oral opinion, which was subsequently confirmed by delivery of a written opinion dated January 6, 2017 and based upon and subject to various assumptions made, procedures followed, matters considered, and qualifications and limitations upon the review undertaken in preparing its opinion, the merger consideration pursuant to the merger agreement was fair, from a financial point of view, to Mast s stockholders. For a detailed discussion of Roth s opinion, please refer to the section entitled The Merger Opinion of Roth Capital Partners and Mast s Financial Advisor beginning on page [ ]. The Committee also considered the factors described below under The Merger Recommendation of the Mast Board; Reasons for the Merger , as well as the process of SEC review and the various risks, such as non-consummation of the merger, arising in connection with the proposed transaction. Following extensive discussion of all of the foregoing by the Committee, the Committee unanimously recommended that the Mast Board (i) approve the merger agreement and consummation of the merger upon the terms and subject to the conditions set forth in the merger agreement, (ii) determine that

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the terms of the merger agreement and the transactions contemplated by the merger agreement, including the merger, are fair to, advisable and in the best interests of Mast and its stockholders, (iii) direct that the merger agreement be submitted to Mast s stockholders for adoption at the special meeting, (iv) approve the filing of a registration statement for the shares to be issued to Savara pursuant to the merger agreement, and (v) recommend that Mast s stockholders adopt the merger agreement and approve the transactions contemplated by the merger agreement, including the merger. Following the Committee meeting, the Mast Board held a meeting at which the foregoing was presented and discussed. Following an extensive discussion of the foregoing, the Mast Board unanimously (A) approved the merger agreement and consummation of the merger upon the terms and subject to the conditions set forth in the merger agreement, (B) determined that the terms of the merger agreement and the transactions contemplated by the merger agreement, including the merger, are fair to, advisable and in the best interests of Mast and its stockholders, (C) directed that the merger agreement be submitted to Mast s stockholders for adoption at a special meeting, (D) approved the filing of a registration statement for the shares to be issued to Savara pursuant to the merger agreement, and (E) recommended that Mast s stockholders adopt the merger agreement and approve the transactions contemplated by the merger agreement, including the merger. The Mast Board then instructed management to finalize the transaction documents and enter into the merger agreement consistent with its instructions.

Later on January 6, 2017, each of Savara, Mast, and Merger Sub executed and delivered the merger agreement, effective as of January 6, 2017.

On January 7, 2017, Savara and Mast issued a joint press release announcing the execution of the merger agreement and the proposed transaction.

Mast Reasons for the Merger

The Mast Board considered the following factors in reaching its conclusion to approve and adopt the Merger Agreement and the transactions contemplated thereby and to recommend that the Mast stockholders approve the merger, adopt the Merger Agreement and approve the other transactions contemplated by the Merger Agreement, including the issuance of shares of Mast common stock in the merger, all of which the Mast Board viewed as supporting its decision to approve the business combination with Savara:

The Mast Board believes, based in part on the judgment, advice and analysis of Mast management with respect to the potential strategic, financial and operational benefits of the merger (which judgment, advice and analysis was informed in part on the business, technical, financial, accounting and legal due diligence investigation performed with respect to Savara), that:

- the combined organization will be a clinical-stage company with a diversified development portfolio;
- Savara has two product candidates in late stage clinical trials: AeroVanc and Molgradex;
- the combined organization will be led by experienced senior management from Savara and a board of directors of five members designated by Savara and two members designated by Mast;

Savara has delivered voting agreements from its officers, directors and certain of its affiliated stockholders, representing approximately 30% of Savara s outstanding capital stock, in which each such individual or entity has agreed to vote in favor of the Merger Agreement and the related transactions; and

the combined company s ability to maintain Mast s listing on the NYSE MKT.

The Mast Board also reviewed with the management of Mast the current plans of Savara for developing its product candidates to confirm the likelihood that the combined organization would possess sufficient financial resources to allow the management team to focus initially on the continued development of its product candidates. The Mast Board also considered the possibility that the combined organization would be able to take advantage of the potential benefits resulting from the combination of Mast and Savara to raise additional funds in the future.

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The Mast Board considered the opportunity as a result of the merger for Mast stockholders to participate in the potential value that may result from development of the Savara product candidate portfolio and the potential increase in value of the combined organization following the merger.

The Mast Board concluded that the merger would provide the existing Mast stockholders with a significant opportunity to participate in the potential increase in value of the combined organization following the merger.

The Mast Board considered the analyses of Roth, and its opinion to the Mast Board as to the fairness to Mast, from a financial point of view and as of the date of such opinion, of the exchange ratio for the conversion of Savara capital stock into Mast common stock, as more fully described below under the caption The Merger Opinion of the Mast Financial Advisor.

The Mast Board also reviewed various factors impacting the financial condition, results of operations and prospects for Mast, including:

- the strategic alternatives of Mast to the merger, including potential transactions that could have resulted from discussions that Mast s management conducted with other potential merger partners;
- the consequences of the negative results from the vepoloxamer clinical trial, and the likelihood that the resulting circumstances for the company would not change for the benefit of the Mast stockholders in the foreseeable future on a stand-alone basis;
- Mast s prospects to raise the significant amount of funds it would require to continue to complete the required development and clinical trials for its AIR001 product candidate would not change for the benefit of the Mast stockholders in the foreseeable future on a stand-alone basis;
- the risks associated with, and the uncertain value, timing and costs to stockholders of, liquidating Mast or effecting a sale of all or some of its assets and thereafter distributing the proceeds;
- the risks of continuing to operate Mast on a stand-alone basis, including Mast s current financial situation, the need to rebuild the company s product candidate development programs, infrastructure and management to continue its operations; and
- the risks associated with Mast s inability to maintain its NYSE MKT listing without completing the merger.

The Mast Board also reviewed the terms and conditions of the proposed Merger Agreement and associated transactions, as well as the safeguards and protective provisions included therein intended to mitigate risks, including:

the fact that immediately following the consummation of the merger, Savara stockholders, warrantholders and optionholders will own approximately 76% of the fully-diluted common stock of Mast, with Mast stockholders, optionholders and warrantholders, whose shares of Mast stock will remain outstanding after the merger, holding approximately 24% of the fully-diluted common stock of Mast;

the final exchange ratio used to establish the number of shares of Mast common stock to be issued in the merger is based upon Mast s capitalization numbers immediately prior to the consummation of the merger; however, the estimated exchange ratio contained in this proxy statement/prospectus/information statement is based upon Mast s capitalization numbers immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted to account for the issuance of any additional shares of Mast common stock prior to the consummation of the merger and Mast s net cash at closing;

the limited number and nature of the conditions to the Savara obligation to consummate the merger, including the absence of any financing contingency, and the limited risk of non-satisfaction of such conditions as well as the likelihood that the merger will be consummated on a timely basis;

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the respective rights of, and limitations on, Mast and Savara under the Merger Agreement to consider certain unsolicited acquisition proposals under certain circumstances should Mast or Savara receive a superior proposal;

the reasonableness of the potential termination fee payable by Mast under certain circumstances of $1.8 million or the reasonableness of the potential termination fee payable by Savara under certain circumstances of $2.5 million;

the voting agreements, pursuant to which certain directors, officers and affiliated stockholders of Savara agreed, solely in their capacity as stockholders, to vote all of their shares of Savara capital stock in favor of adoption of the Merger Agreement; and

the belief that the terms of the Merger Agreement, including the parties representations, warranties and covenants, and the conditions to their respective obligations, are reasonable under the circumstances.

In the course of its deliberations, the Mast Board also considered a variety of risks and other countervailing factors related to entering into the merger, including:

the $1.8 million termination fee that may be payable to Savara upon the occurrence of certain events, and the potential effect of such termination fee or reimbursement of transaction expenses in deterring other potential acquirers from proposing an alternative transaction that may be more advantageous to Mast stockholders;

the risk that if Mast s debt at the closing exceeds its net cash at the closing, the allocation of 24% ownership to Mast stockholders, optionholders and warrantholders of the outstanding common stock of Mast immediately following the consummation of the merger will be reduced;

the substantial expenses to be incurred in connection with the merger;

the possible volatility, at least in the short term, of the trading price of the Mast common stock resulting from the merger announcement;

the risk that the merger might not be consummated in a timely manner or at all and the potential adverse effect of the public announcement of the merger or on the delay or failure to complete the merger on the reputation of Mast;

the risk to Mast s business, operations and financial results in the event that the merger is not consummated;

the strategic direction of the continuing entity following the completion of the merger, which will be determined by a board of directors, a majority of which will initially designated entirely by Savara;

the fact that the merger would give rise to substantial limitations on the utilization of Mast s NOLs; and

various other risks associated with the combined organization and the merger, including those described in the section entitled Risk Factors in this proxy statement/prospectus/information statement.

The foregoing information and factors considered by the Mast Board are not intended to be exhaustive but are believed to include all of the material factors considered by the Mast Board. In view of the wide variety of factors considered in connection with its evaluation of the merger and the complexity of these matters, the Mast Board did not find it useful to attempt, and did not attempt, to quantify, rank or otherwise assign relative weights to these factors. In considering the factors described above, individual members of the Mast Board may have given different weight to different factors. The Mast Board conducted an overall analysis of the factors described above, including thorough discussions with, and questioning of, the Mast management team and the legal and financial advisors of Mast, and considered the factors overall to be favorable to, and to support, its determination.

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Savara Reasons for the Merger

In the course of reaching its decision to approve the merger, the Savara Board consulted with Savara s senior management, financial advisor and legal counsel, reviewed a significant amount of information and considered a number of factors, including, among others:

- that the combined company will have a pipeline of novel inhalation therapies for the treatment of serious or life-threatening rare respiratory diseases featuring three product candidates, each in advanced clinical development including Savara s AeroVanc and Molgradex programs and Mast s AIR001 program;

- the expectation that the merger with Mast would be a more effective means to access capital through the public markets or other transactions compared to other alternatives considered, including an initial public offering which Savara had considered pursuing;

- the potential to provide its current stockholders with greater liquidity by owning stock in a public company;

- that the shares of Mast common stock issued to Savara stockholders will be registered pursuant to a Form S-4 registration statement by Mast and will become freely tradable (subject to the terms of applicable lock-up agreements) for Savara s stockholders who are not affiliates of Savara;

- the likelihood that the merger will be consummated on a timely basis;

- the terms and conditions of the Merger Agreement including the following:

  - the determination that an exchange ratio that is fixed and not subject to adjustment based on trading prices is appropriate to reflect the expected relative percentage ownership of Mast securityholders and Savara securityholders, in the judgment of the Savara Board;

  - the expectation that the merger should be treated as a reorganization for U.S. federal income tax purposes, with the result that the Savara stockholders generally will not recognize taxable gain or loss for U.S. federal income tax purposes;

- the limited number and nature of the conditions of the obligation of Mast to consummate the merger and the limited risk of non-satisfaction of such conditions;

- the rights of Savara under the Merger Agreement to consider certain unsolicited acquisition proposals under certain circumstances should Savara receive a superior proposal; and

the conclusion of Savara s board of directors that the potential termination fee of $1.8 million, or in some situations the reimbursement of certain transaction expenses incurred in connection with the merger of up to $250,000, payable by Mast to Savara and the circumstances when such fee may be payable, were reasonable.

The Savara Board also considered a number of uncertainties and risks in its deliberations concerning the merger and the other transactions contemplated by the Merger Agreement, including the following:

the possibility that the merger might not be completed and the potential adverse effect of the public announcement of the merger on the reputation of Savara and the ability of Savara to obtain financing in the future in the event the merger is not completed;

the termination fee of $2.5 million or in some situations the reimbursement of certain transaction expenses incurred in connection with the merger of up to $250,000, payable by Savara to Mast upon the occurrence of certain events, and the potential effect of such termination fee in deterring other potential acquirers from proposing an alternative transaction that may be more advantageous to Savara s stockholders;

the limited cash resources of the combined organization expected to be available at the closing of the merger and the risk that the combined company would not be able to raise sufficient funds following the closing of the merger to continue clinical development of its development programs;

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the risk that the merger might not be consummated in a timely manner or at all;

the transaction expenses and operating expenses to be incurred in connection with the merger and related administrative challenges associated with combining the companies;

the additional public company expenses and obligations that Savara s business will be subject to following the merger that it has not previously been subject to; and

various other risks associated with the combined organization and the merger, including the risks described in the section entitled Risk Factors in this proxy statement/prospectus/information statement.

The foregoing information and factors considered by the Savara Board are not intended to be exhaustive but are believed to include all of the material factors considered by the Savara Board. In view of the wide variety of factors considered in connection with its evaluation of the merger and the complexity of these matters, the Savara Board did not find it useful, and did not attempt, to quantify, rank or otherwise assign relative weights to these factors. In considering the factors described above, individual members of the Savara Board may have given different weight to different factors. The Savara Board conducted an overall analysis of the factors described above, including discussions with, and questioning of, Savara s management and Savara s legal and financial advisors, and considered the factors overall to be favorable to, and to support, its determination.

Opinion of Roth Capital Partners as Mast s Financial Advisor

The Mast Board retained Roth on October 24, 2016 to render an opinion as to the fairness to Mast, from a financial point of view, of merger consideration to be paid by Mast to the holders of shares of Savara common stock, or consideration, in the Merger pursuant to the Merger Agreement.

On January 6, 2017, Roth rendered its oral opinion to the Mast Board (which was subsequently confirmed in writing by delivery of Roth s written opinion dated the same date) to the effect that, based upon and subject to the assumptions, factors, qualifications and limitations set forth in the written opinion described herein, as of January 6, 2017, the consideration to be paid by Mast in the Merger was fair, from a financial point of view, to Mast.

Roth s opinion was prepared solely for the information of the Mast Board and only addressed the fairness, from a financial point of view, to Mast of the consideration to be paid by Mast in the Merger. Roth was not requested to opine as to, and Roth s opinion does not address, the relative merits of the Merger or any alternatives to the Merger, Mast s underlying decision to proceed with or effect the Merger, or any other aspect of the Merger. Roth s opinion does not address the fairness of the Merger to the holders of any class of securities, creditors or other constituencies of Mast and is not a valuation of Mast or Savara or their respective assets or any class of their securities. Roth did not express an opinion about the fairness of the amount or nature of any compensation payable or to be paid to any of the officers, directors or employees, of Savara, whether or not relative to the Merger.

The summary of Roth s opinion in this proxy statement is qualified in its entirety by reference to the full text of its written opinion, which is included as Annex B to this proxy statement solicitation and sets forth the procedures followed, assumptions made, qualifications and limitations on the review undertaken and other matters considered by Roth in preparing its opinion. Roth s opinion was prepared solely for the information of the Mast Board for its use in connection with its consideration of the Merger. Neither Roth s written opinion nor the summary of its opinion and the related analyses set forth in this prospectus/proxy statement are

intended to be, and they do not constitute, advice or a recommendation to any stockholder as to how such stockholder should act or vote with respect to any matter relating to the Merger or any other matter.

The terms of the Merger, the consideration to be paid in the Merger, and the related transactions were determined through arm s length negotiations between Mast and Savara and were approved unanimously by the

Mast Board. Roth did not determine the consideration to be paid by Mast in connection with the Merger. For purposes of its opinion, management of Mast advised Roth and, with the consent of the Mast Board, Roth assumed without independent verification that (i) the Net Cash Adjustment Amount specified in the Merger Agreement will be $2,000,000, (ii) the final exchange ratio determined in accordance with the Merger Agreement will be 46.92 shares of Mast common stock for each share of Savara common stock, and (iii) 1,018,747,837 shares of Mast common stock will be issued in the Merger. In its opinion, Roth expressly disclaimed any opinion as to (i) the reasonableness of these assumptions, (ii) the amount of the actual Net Cash Adjustment, (iii) the final exchange ratio determined pursuant to the Merger Agreement, or (iv) the actual number of shares of Mast common stock to be issued in the Merger.

In connection with rendering the opinion described above and performing its related financial analyses, Roth, among other things:

- reviewed a draft of the Merger Agreement dated January 5, 2017;
- reviewed certain information, including financial forecasts, relating to the business, earnings, cash flow, assets, liabilities and prospects of Mast and Savara that were furnished to Roth by Mast and Savara;
- conducted discussions with members of senior management and representatives of Mast and Savara concerning the matters described in the prior clause;
- reviewed the pro forma ownership of the combined entity resulting from the Merger;
- discussed the past and current operations and financial condition and the prospects of Mast and Savara with members of senior management of Mast and of Savara, respectively;
- reviewed the financial terms, to the extent publicly available, of certain acquisition and financing transactions that Roth deemed relevant; and
- performed such other analyses and considered such other factors as Roth deemed appropriate for the purpose of rendering its opinion.

In arriving at its opinion, Roth relied upon and assumed, without independent verification, the accuracy and completeness of all information that was publicly available or was furnished, or otherwise made available to Roth or discussed with or reviewed by or for Roth, and further assumed that the financial information provided to Roth had been prepared on a reasonable basis in accordance with industry practice, and that management of Mast was not aware of any information or facts that would make any information provided to Roth incomplete or misleading.

With respect to the financial forecasts, estimates and other forward-looking information reviewed by Roth, Roth assumed that such information had been reasonably prepared based on assumptions reflecting the best currently available estimates and judgments of Mast s management as to the expected future combined results and financial condition of Mast and Savara after giving effect to the Merger. Roth was not engaged to assess the achievability of

any such financial forecasts, estimates or forward-looking information or the assumptions on which they were based, and Roth expressed no opinion as to such information or assumptions. In addition, Roth did not assume any responsibility for, and did not perform, any appraisals or valuation of any specific assets or liabilities (fixed, contingent or other) of Mast or Savara, nor was Roth furnished or provided with any such appraisals or valuations. Without limiting the generality of the foregoing, Roth was not engaged to, and did not undertake, any independent analysis of any pending or threatened litigation, regulatory action, possible unasserted claims or other contingent liabilities, to which Mast, Savara or any of their respective affiliates is a party or may be subject, and at the direction of Mast and with its consent, Roth s opinion made no assumption concerning, and did not consider, the possible assertion of claims, outcomes or damages arising out of any such matters.

Roth relied upon and assumed, without independent verification, that the representations and warranties of all parties set forth in the Merger Agreement and all related documents and instruments that are referred to

therein are true and correct, that each party will fully and timely perform all of the covenants and agreements required to be performed by such party, that the Merger will be consummated pursuant to the terms of the Merger Agreement, without amendment, and that all conditions to the consummation of the Merger will be satisfied without waiver thereof. Roth further assumed that the Merger Agreement was in all material respects identical to the draft of the Merger Agreement provided to Roth. Finally, Roth also assumed that all the necessary regulatory approvals and consents required for the Merger, including the approval of the stockholders of Mast and Savara, will be obtained in a manner that will not adversely affect Mast or Savara or the contemplated benefits of the Merger.

In connection with its opinion, Roth assumed and relied upon, without independent verification, the accuracy and completeness of all of the financial, legal, regulatory, tax, accounting and other information provided to, discussed with or reviewed by it. Roth s opinion does not address any legal, regulatory, tax or accounting issues. Roth s fairness opinion was approved by its fairness committee prior to delivering it to Mast.

Roth s opinion is necessarily based upon the information available to Roth and facts and circumstances as they existed and were subject to evaluation as of January 6, 2017, which is the date of the Roth opinion. Although events occurring after the date of the Roth opinion could materially affect the assumptions used in preparing the opinion, Roth does not have any obligation to update, revise or reaffirm its opinion and Roth expressly disclaims any responsibility to do so. Roth did not express any opinion as to the price at which shares of Mast s common stock may trade following announcement of the Merger or at any future time.

The consideration to be paid by Mast in the Merger was determined through arm s length negotiations between Mast and Savara and was approved by the Mast and Savara boards of directors. Roth did not provide advice to the Mast Board during these negotiations, the decision to enter into the Merger was solely that of the Mast Board. Roth s opinion and its presentation to the Mast Board was one of many factors taken into consideration by the Mast Board in deciding to approve, adopt and authorize the Merger Agreement. Consequently, the analyses as described herein should not be viewed as determinative of the opinion of the Mast Board with respect to the consideration to be paid by Mast in the Merger or of whether the Mast Board would have been willing to agree to different consideration.

The following is a summary of the material financial analyses performed by Roth in connection with the preparation of its fairness opinion, which opinion was rendered orally to the Mast Board (and subsequently confirmed in writing by delivery of Roth s written opinion dated the same date) on January 6, 2017. The preparation of analyses and a fairness opinion is a complex analytic process involving various determinations as to the most appropriate and relevant methods of financial analysis and the application of those methods to the particular circumstances and, therefore, such an opinion is not readily susceptible to summary description and this summary does not purport to be a complete description of the analyses performed by Roth or the delivery of Roth s opinion to the Mast Board.

This summary includes information presented in tabular format. In order to fully understand the financial analyses presented by Roth, the tables must be read together with the text of each analysis summary and considered as a whole. The tables alone do not constitute a complete summary of the financial analyses. Considering any portion of such analyses and of the factors considered, without considering all analyses and factors, could create a misleading or incomplete view of the process underlying Roth s opinion.

In furnishing its opinion, Roth did not attempt to combine the analyses described herein into one composite valuation range, nor did Roth assign any quantitative weight to any of the analyses or the other factors considered. Furthermore, in arriving at its opinion, Roth did not attribute any particular weight to any analysis or factor considered by it, but rather made qualitative judgments as to the significance and relevance of each analysis and factor in light of one another. Accordingly, Roth has stated that it believes that its analyses must be considered as a whole and that considering any portion of its analyses, without considering all of the analyses, could create a misleading or

incomplete view of the process underlying its opinion or the conclusions to be drawn therefrom.

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In conducting the analysis as to the fairness to Mast, from a financial point of view, of the consideration to be paid by Mast pursuant to the terms of the Merger Agreement, Roth evaluated the stand-alone valuations of Mast and Savara. Roth then compared the pro-forma Mast ownership based on the Merger Agreement, with Mast s stand-alone valuation.

The results of the application by Roth of each of the valuation methodologies utilized in connection with its fairness opinion is summarized below.

Consideration to be Paid in the Merger

For purposes of its opinion, management of Mast advised Roth and, with the consent of the Mast Board, Roth assumed without independent verification that (i) the Net Cash Adjustment Amount specified in the Merger Agreement will be $2,000,000, (ii) the final exchange ratio determined in accordance with the Merger Agreement will be 46.92 shares of Mast common stock for each share of Savara common stock, and (iii) 1,018,747,837 shares of Mast common stock will be issued in the Merger. Based upon the closing price per share of Mast common stock on January 6, 2017 of $0.10, Roth observed that Mast was paying approximately $100.8 million to acquire Savara.

Based on the expected exchange ratio, Mast s management calculated the pro forma ownership of the combined company (NewCo) as follows:

Pro-Forma Ownership Structure[1]

	Stipulated Value[2]	Pro-Forma Shares Outstanding	Ownership Percentage
Mast	$ 29,634,184	262,519,659	20.5%
Savara	$ 115,000,000	1,018,747,837	79.5%
NewCo	$ 144,634,184	1,281,267,496	100.0%

Source: Merger Agreement

Notes: (1) Per Mast Management

(2) As per Merger Agreement

Roth noted that the $100.8 million consideration being paid by Mast for Savara was lower than Roth s estimated valuation range of $182.7 million to $234.3 million for Savara, as described in more detail below.

Roth estimated the value of NewCo as approximately $241.4 million based on the midpoint of the valuation ranges for each of Mast and Savara of $32.9 million and $208.0 million, as described in more detail below. Roth noted that the 20.5% value of NewCo attributable to Mast s stockholders represented an implied enterprise value of approximately $49.5 million for Mast as compared to a stand-alone value for Mast of approximately $32.9 million.

Estimated Mast Stand-Alone Valuation

Roth evaluated the value of Mast on a stand-alone basis using the following valuation methodologies:

Public Market Valuation;

Public Comparable Analysis Cardiovascular;

Discounted Cash Flow Analysis of Mast s AIR001 product candidate;

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Utilizing the various valuation methodologies listed above, Roth estimated a valuation of Mast utilizing the Public Market Valuation of $19.6 million to $33.8 million; Public Comparable Analysis Cardiovascular of $36.0 million to $49.9 million and Discounted Cash Flow Analysis of $25.5 million to $32.5 million.

The results of these analyses are summarized as follows (in millions):

	Implied Enterprise Value	
	Low	High
Methodology		
Mast Public Market Valuation	$ 19.6	$ 33.8
Public Comparable Analysis Cardiovascular	$ 36.0	$ 49.9
Discounted Cash Flow Analysis AIR001	$ 25.5	$ 32.5
Average	$ 27.1	$ 38.7

Notes: High and low ranges are based on mean and median values.

Public Company Valuation

Roth noted that since Mast s clinical set-back in mid-September, Mast s market value had ranged from $15.0 million to $29.1 million and that during the same period, Mast s enterprise value had ranged from $19.6 million to $33.8million[1].

Source: Capital IQ

Note: As of 1/6/2107

(1) Enterprise value assumes a net cash position of ($4.7 million).

Public Comparable Analysis Cardiovascular

Roth reviewed the total enterprise values of publicly traded companies with cardiovascular product candidates in development. The comparable companies analysis uses data from comparable guideline companies to develop a measure of current value for Mast. The theory underlying the comparable companies valuation is that companies in the same industry with similar operating characteristics should have certain valuation benchmarks in common. The goal of the analysis is to develop a premise for relative value, which when coupled with other valuation approaches, presents a foundation for determining a range of firm value.

Selected cardiovascular trading comparables had a median and mean enterprise value of $36.0 million and $49.9 million, respectively:

Company	Ticker	Stage of Development	1/6/2017 Price	52 Week High	52 Week Low	Market Cap ($M)	Enterprise Value ($M)
Gemphire Therapeutics Inc.	GEMP	Phase III	$ 9.23	$ 13.98	$ 7.25	$ 85.6	$ 57.2

Tenax Therapeutics, Inc.	TENX	Phase II	$ 2.28	$ 3.12	$ 1.21	$ 64.1	$ 56.6
Capricor Therapeutics, Inc.	CAPR	Phase II	$ 2.64	$ 5.40	$ 1.88	$ 56.5	$ 49.9
Bellerophon Therapeutics, Inc.	BLPH	Phase III	$ 0.61	$ 4.58	$ 0.43	$ 19.3	$ 8.1
Acasti Pharma Inc.	ACST	Phase II	$ 1.29	$ 3.05	$ 1.11	$ 13.8	$ 8.4
				Mean		**$ 47.8**	**$ 36.0**
				Median		**$ 56.5**	**$ 49.9**

Source: Biomed Tracker, Capital IQ, Evaluate Pharma

Note: Data as of 1/6/2017/12/16

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Discounted Cash Flow Analysis

The discounted cash flow analysis is a forward looking methodology and is based on projected future cash flows to be generated by Mast which are then discounted back to the present. This methodology has three primary components: (1) the present value of projected unlevered cash flows for a determined period; (2) the present value of the terminal value of cash flows based on the declining growth method (representing firm value beyond the time horizon on the projections); (3) the weighted average cost of capital (WACC) used to discount such future cash flows and terminal value back to the present. In the discounted cash flow analysis, Roth used Mast management s unlevered free cash flow projections and then applied a probability of success adjustment based on PAREXEL s R&D Sourcebook probabilities of clinical success in Phase 1, Phase 2, Phase 3 and NDA stages of development. The future cash flows plus the terminal value of such cash flows are discounted by the WACC, to derive a present value.

In conducting its discounted cash flow analysis for the purpose of determining the enterprise value of Mast, Roth applied the projected unlevered free cash flow that Mast is expected to generate during fiscal years 2017 to 2029 from its AIR001 program based upon financial projections prepared by Mast s management. Terminal values based on declining cash flow at a rate of 3.0% to 7.0% were applied to management s cash flow estimates in year 2029 to complete the basis for calculating the present value of future free cash flows. The future free cash flows are then discounted by the WACC, to derive a present value. In selecting an appropriate discount rate, Roth took into account the industry s unlevered equity beta of 0.93, Mast s debt to equity ratio of 19.5%, levered beta of 1.05, the equity risk premium of 19% based on Duff & Phelps 2015 Valuation Handbook, the risk free rate of 2.4% for 10-year U.S. treasury securities, pre-tax cost of debt of 3.3% (average of comparable companies), Mast s tax rate assumption of 34.0%, Mast s equity to total capitalization of 83.6% and its debt to total capitalization of 16.4%. Application of the foregoing principles resulted in a 19.1% WACC. Roth performed a sensitivity analysis using discount rates from 19.0% to 21.0% to arrive at a range of present values.

Based on the foregoing, Roth computed an enterprise value range of $25.5 million to $32.5 million. In evaluating the foregoing, it should be noted that the WACC does not take into consideration the specific firm risks such as bankruptcy. As a result, Mast s true WACC may be higher when taking into consideration the risks of default and negative operating profit history of the business which would have the effect of reducing the enterprise value range. By conducting an analysis of a range of discount rates rather than relying one specific WACC, Roth is comfortable that the analysis is appropriate.

Mast Therapeutics, Inc.

Discounted Cash Flow Analysis

($ in millions)

	2017	2018	2019	2020	2021	2022	2023	2024
Revenue Projections AIR001 (Cardio)	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 1,132.0	$ 2,355.5	$ 3,676.0
YoY Growth							*108%*	*56%*
Free Cash Flow[1]	($ 2.5)	($ 23.1)	($ 34.3)	($ 37.5)	($ 32.3)	$ 111.0	$ 325.3	$ 557.7
		25.0%	25.0%	25.0%	25.0%	12.5%	9.6%	9.6%

Probability of Success Adjustment[2]								
Free Cash Flow (Risk Adjusted)	**($ 2.5)**	**($ 5.8)**	**($ 8.6)**	**($ 9.4)**	**($ 8.1)**	**$ 13.9**	**$ 31.3**	**$ 53.7**

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	2025	2026	2027	2028	2029
Revenue Projections AIR001 (Cardio)	$ 2,549.7	$ 1,326.4	$ 690.0	$ 717.8	$ 746.8
YoY Growth	*-31%*	*-48%*	*-48%*	*4%*	*4%*
Free Cash Flow[1]	$ 392.5	$ 192.4	$ 82.8	$ 94.6	$ 104.2
Probability of Success Adjustment[2]	9.6%	9.6%	9.6%	9.6%	9.6%
Free Cash Flow (Risk Adjusted)	**$ 37.8**	**$ 18.5**	**$ 8.0**	**$ 9.1**	**$ 10.0**

	Declining Growth Terminal Value Methodology				Declining Growth Method		
	NPV of Cash Flows	PV of Terminal Value Declining Growth Method			NPV+Terminal Value		
Discount Rate	(2017-2029)	3%	5%	7%	3%	5%	7%
19.0%	$ 27.0	$ 5.5	$ 4.9	$ 4.4	$ 32.5	$ 31.9	$ 31.4
19.5%	$ 25.7	$ 5.1	$ 4.6	$ 4.2	$ 30.8	$ 30.3	$ 29.9
20.0%	$ 24.5	$ 4.7	$ 4.3	$ 3.9	$ 29.2	$ 28.8	$ 28.4
20.5%	$ 23.3	$ 4.4	$ 4.0	$ 3.6	$ 27.7	$ 27.3	$ 26.9
21.0%	$ 22.2	$ 4.1	$ 3.7	$ 3.4	$ 26.3	$ 25.9	$ 25.5

Note: (1) FY2017 FY2029 figures are based on Mast s estimates of unlevered free cash flow
(2) Probability of Success (PoS) adjustment based on PAREXEL s R&D Sourcebook probabilities of clinical in Phase 1, Phase 2, Phase 3, and NDA respectively; PoS adjustment applied to cash flows subject to clinical development risk

Estimated Savara Stand-Alone Valuation

Roth evaluated the value of Savara on a stand-alone basis, using the following valuation methodologies:

Private Valuation Step-Up Analysis;

Public Comparable Analysis Respiratory;

Respiratory Licensing Transactions;

Precedent Respiratory M&A Transactions; and

Discounted Cash Flow Analysis.

Utilizing the various valuation methodologies listed above, Roth estimated a valuation of Savara utilizing the Private Valuation Step-up Analysis of $113.1 million to $145.3 million; Public Comparable Analysis Respiratory of $71.1 million to $171.6 million; Respiratory Licensing Transactions of $150 million to $184.3 million; Precedent Respiratory M&A Transactions of $396.9 million to $446.5 million; and Discounted Cash Flow Analysis of $182.4 million to $224.0 million.

The results of these analyses are summarized as follows (in millions):

	Implied Enterprise Value	
	Low	**High**
Methodology		
Private Company Step-up Analysis	$ 113.1	$ 145.3
Public Comparable Analysis Respiratory	$ 71.1	$ 171.6
Respiratory Licensing Transactions	$ 150.0	$ 184.3
Precedent Respiratory M&A Transactions	$ 396.9	$ 446.5
Discounted Cash Flow Analysis*	$ 182.4	$ 224.0
Average	$ 182.7	$ 234.3

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Notes:

High and low ranges are based on mean and median values.

* Enterprise value based on the discounted cash flow analysis of AeroVanc (U.S.) and PAP (Worldwide)

Private Valuation Step-up Analysis

Roth reviewed the step-up multiples of selected life science company IPOs which compares the pre-money valuation of the latest private financing round, if available, with the post IPO marketing valuation. The purpose of the step-up analysis is to estimate the value of a private company as if it was publicly traded. Prior life science IPOs had a median and average step-up multiples of 1.1x and 1.4x, arriving at an applied enterprise value range for Savara of $113.1 million to $145.3 million.

Pricing Date	Company	Ticker	Offer Price	Amount Raised in IPO ($M)	Pre-Money Equity Valuation ($M)	IPO Step-up Multiple	Post IPO Market Value ($M)[1]
10/26/16	Myovant Sciences Ltd	MYOV	$ 15.00	$ 217.5	$ 685.9	1.0x	$ 685.9
10/25/16	Ra Pharmaceuticals Inc	RARX	$ 13.00	$ 91.6	$ 98.7	1.9x	$ 187.8
10/19/16	iRhythm Technologies Inc	IRTC	$ 17.00	$ 123.1	$ 125.7	1.9x	$ 236.0
10/18/16	Crispr Therapeutics AG	CRSP	$ 14.00	$ 62.0	$ 365.3	1.3x	$ 489.1
10/11/16	AzurRx BioPharma Inc	AZRX	$ 5.50	$ 5.3	$ 47.7	1.0x	$ 47.7
10/05/16	Obalon Therapeutics Inc	OBLN	$ 15.00	$ 75.0	$ 90.7	1.8x	$ 164.3
09/28/16	Fulgent Genetics Inc	FLGT	$ 9.00	$ 43.5	$ 110.0	1.0x	$ 109.9
09/26/16	Shineco Inc	TYHT	$ 4.50	$ 7.7	$ 86.9	1.0x	$ 87.0
09/22/16	AC Immune SA	ACIU	$ 11.00	$ 75.9	$ 172.1	3.1x	$ 533.5
09/20/16	Novan Inc	NOVN	$ 11.00	$ 51.9	$ 417.1	0.3x	$ 116.7
08/10/16	Medpace Holdings Inc	MEDP	$ 23.00	$ 185.2	$ 726.6	1.0x	$ 726.6
08/10/16	Protagonist Therapeutics Inc	PTGX	$ 12.00	$ 90.0	$ 59.9	1.8x	$ 105.9
08/04/16	Gemphire Therapeutics Inc	GEMP	$ 10.00	$ 30.0	$ 30.2	1.8x	$ 54.3
07/27/16	Tactile Systems Technology Inc	TCMD	$ 10.00	$ 41.2	$ 30.8	4.1x	$ 125.3
07/26/16	Kadmon Holdings LLC	KDMN	$ 12.00	$ 75.0	$ 463.4	1.0x	$ 463.4
07/20/16	Patheon NV	PTHN	$ 21.00	$ 718.8	$ 1,400.0	1.6x	$ 2,234.0
07/19/16	Audentes Therapeutics Inc	BOLD	$ 15.00	$ 75.0	$ 219.1	1.1x	$ 240.3
06/29/16	Syros Pharmaceuticals Inc	SYRS	$ 12.50	$ 57.5	$ 188.6	1.2x	$ 227.0
06/21/16	Selecta Biosciences Inc	SELB	$ 14.00	$ 70.0	$ 73.2	2.5x	$ 180.6
06/02/16	Sensus Healthcare Inc	SRTS	$ 5.50	$ 12.7	$ 55.4	1.0x	$ 55.3
06/01/16	Moleculin Biotech Inc	MBRX	$ 6.0	$ 9.2	$ 55.2	1.0x	$ 55.3

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Pricing Date	Company	Ticker	Offer Price	Amount Raised in IPO ($M)	Pre-Money Equity Valuation ($M)	IPO Step-up Multiple	Post IPO Market Value ($M)[1]
06/01/16	Clearside Biomedical Inc	CLSD	$ 7.00	$ 57.0	$ 101.2	0.8x	$ 80.1
05/25/16	Reata Pharmaceuticals Inc	RETA	$ 11.00	$ 69.6	$ 154.6	1.1x	$ 166.9
05/18/16	Merus BV	MRUS	$ 10.00	$ 61.4	$ 120.3	0.8x	$ 92.7
05/17/16	PhaseRx Inc	PZRX	$ 5.00	$ 18.5	$ 43.1	0.9x	$ 39.4
05/12/16	Oncobiologics Inc	ONS	$ 6.00	$ 35.0	$ 179.0	0.5x	$ 90.9
05/06/16	Spring Bank Pharmaceuticals Inc	SBPH	$ 12.00	$ 12.7	$ 72.4	1.0x	$ 72.4
05/05/16	Intellia Therapeutics Inc	NTLA	$ 18.00	$ 124.2	$ 229.3	2.2x	$ 507.5
04/06/16	Aeglea Biotherapeutics Inc	AGLE	$ 10.00	$ 54.8	$ 65.2	1.1x	$ 74.5
03/22/16	Corvus Pharmaceuticals Inc	CRVS	$ 15.00	$ 70.5	$ 214.7	1.1x	$ 235.6
03/02/16	Syndax Pharmaceuticals Inc	SNDX	$ 12.00	$ 57.7	$ 171.8	0.9x	$ 150.8
02/10/16	Proteostasis Therapeutics Inc	PTI	$ 8.00	$ 50.0	$ 153.5	0.7x	$ 102.9
02/10/16	AveXis Inc	AVXS	$ 20.00	$ 95.0	$ 196.6	1.8x	$ 353.0
02/02/16	BeiGene Ltd	BGNE	$ 24.00	$ 182.2	$ 360.9	1.6x	$ 574.2
02/02/16	Editas Medicine Inc	EDIT	$ 16.00	$ 108.6	$ 326.0	1.4x	$ 462.6
			Mean	**$ 89.0**	**$ 225.5**	**1.4x**	**$ 289.4**
			Median	**$ 62.0**	**$ 153.5**	**1.1x**	**$ 164.3**

Savara IPO Step-up Analysis[2]

	Pre-Money Equity Valuation ($M)	IPO Step-up Multiple	Implied Market Value ($M)	Implied Enterprise Value ($M)
Mean	**$ 115.0**	**1.4x**	**$ 158.3**	**$ 145.3**
Median	**$ 115.0**	**1.1x**	**$ 126.1**	**$ 113.1**

Source: Capital IQ, Dealogic

Note: Includes selected life sciences IPOs from 1/1/2016 1/6/2017

(1) One day after pricing date; Excludes capital raised in IPO

(2) Latest pre-money equity valuation per Savara management; Implied enterprise value assumes Savara net debt of ($13M)

Public Comparable Analysis Respiratory

Roth reviewed the total enterprise values of publicly traded companies with respiratory product candidates in development. The comparable companies analysis uses data from comparable guideline companies to develop a measure of current value for Savara. The theory underlying the comparable companies valuation is that companies in the same industry with similar operating characteristics should have certain valuation benchmarks in common. The goal of the analysis is to develop a premise for relative value, which when coupled with other valuation approaches, presents a foundation for determining a range of firm value.

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Selected respiratory trading comparables had a median and mean enterprise value of $71.1 million and $171.6 million, respectively:

Company	Ticker	Stage of Development	1/6/2017 Price	52 Week High	52 Week Low	Market Cap ($M)	Enterprise Value ($M)
Insmed Incorporated	INSM	Phase III	$ 14.06	$ 16.79	$ 9.02	$ 870.0	$ 704.2
Concert Pharmaceuticals, Inc.	CNCE	Phase II	$ 10.92	$ 17.38	$ 7.11	$ 243.2	$ 135.2
MediciNova, Inc.	MNOV	Phase II	$ 6.10	$ 10.16	$ 3.50	$ 210.6	$ 185.6
ProQR Therapeutics N.V.	PRQR	Phase I	$ 5.00	$ 8.70	$ 3.48	$ 116.7	$ 49.8
Adamis Pharmaceuticals Corporation	ADMP	Phase II	$ 3.30	$ 10.98	$ 2.40	$ 71.2	$ 71.1
Pharmaxis Ltd	PXS	Phase II	$ 0.21	$ 0.27	$ 0.17	$ 67.5	$ 45.2
Aradigm Corporation	ARDM	Phase II	$ 1.75	$ 7.19	$ 1.47	$ 25.9	$ 10.2
				Mean		**$ 229.3**	**$ 171.6**
				Median		**$ 116.7**	**$ 71.1**

Source: Biomed Tracker, Capital IQ, Evaluate Pharma

Note: Data as of 1/6/2017

Respiratory Licensing Comparables

Roth reviewed financial terms, to the extent publicly available, of licensing transactions for assets in the respiratory space at comparable stages of development, from June 2014 to May 2016. Selected comparable licensing deals had a median and average deal value of $150.0 million and $184.3 million, respectively.

Date	Licensor	Licensee	Asset	Indication	Stage at Announcement	Transaction Value ($M)
5/2016	Nobelpharma	Serendex Pharmaceuticals	Molgradex	Pulmonary Alveolar Proteinosis (PAP)	Phase III	$ 10.5
3/2016	AbbVie	Boehringer Ingelheim	Risankizumab	Asthma	Phase III	$ 595.0
8/2015	Bristol-Myers Squibb	Promedior	PRM-151 IV	Pulmonary Fibrosis	Phase II	$ 150.0
6/2015	Vertex Pharmaceuticals	Parion Sciences	VX-371	Cystic Fibrosis (CF)	Phase II	$ 1,170.0*
1/2015	Mylan	Theravance Biopharma	Revefenacin	COAD/COPD	Phase II	$ 265.0
12/2014	Chiesi	Pharmaxis	Bronchitol	Cystic Fibrosis (CF)	Phase III	$ 25.0
6/2014	Boehringer Ingelheim	Vectura	VR506	Asthma	Phase II	$ 12.0
6/2014	AstraZeneca	Synairgen	AZD9412	Asthma	Phase II	$ 232.3
			Mean			**$ 184.3**
			Median			**$ 150.0**

Source: Evaluate Pharma, Company Press Releases

Note: Includes comparable licensing transactions from 2014 2016 with available transaction values
(*) Outlier transaction excluded from mean and median calculation

Precedent Respiratory M&A Transactions

The precedent respiratory M&A analysis uses data based on the values acquirers have previously placed on comparable companies in a merger or acquisition to develop a measure of current value for Savara. Roth examined precedent transactions, from October 2008 through November 2016, involving respiratory clinical development companies that it viewed as similar to Savara. These entities were selected on the basis of the nature of their businesses, their size and operating characteristics. The data available on these transactions, due in part to their size, is limited. Roth examined the data points set out in the table below for the selected precedent transactions.

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Selected respiratory M&A transactions indicate an average and median deal value of $396.9 million and $446.5 million, respectively.

Date	Acquirer	Target	Total Deal Value ($M)
11/2016	Chiesi	Atopix Therapeutics	$ 80.0
9/2016	Horizon Pharma	Raptor Pharmaceutical	$ 800.0
6/2016	Merck	Afferent Pharmaceuticals	$ 1,250.0*
3/2016	Vectura	SkyePharma	$ 621.0
2/2016	Biogen Idec	Stromedix	$ 562.5
12/2015	AstraZeneca	Takeda Pharmaceutical Respiratory Business	$ 575.0
10/2015	Roche	Adheron Therapeutics	$ 580.0
8/2015	Raptor Pharmaceutical	Quinsair Tripex Pharmaceuticals	$ 418.0
5/2015	Circassia Pharmaceuticals	Prosonix	$ 157.4
5/2015	Circassia Pharmaceuticals	Aerocrine	$ 214.3
7/2014	AstraZeneca	Almirall Respiratory Business	$ 2,095.0*
6/2013	Teva	MicroDose Therapeutx	$ 165.0
7/2011	Bristol-Myers Squibb	Amira Pharmaceuticals	$ 475.0
10/2008	Novartis	Nektar Therapeutics Pulmonary Business	$ 115.0
		Mean	**$ 396.9**
		Median	**$ 446.5**

Source: Evaluate Pharma, Company Press Releases
Note: Includes comparable M&A transactions from 2008 - 2016 with available deal values
(*) Outlier transaction excluded from mean and median calculation

Discounted Cash Flow Analysis

As noted above, the discounted cash flow analysis is a forward looking methodology and is based on projected future cash flows to be generated by Savara which are then discounted back to the present. This methodology has three primary components: (1) the present value of projected unlevered cash flows for a determined period; (2) the present value of the terminal value of cash flows based on the declining growth method (representing firm value beyond the time horizon on the projections); (3) the weighted average cost of capital (WACC) used to discount such future cash flows and terminal value back to the present. In the discounted cash flow analysis, Roth used Savara s management s unlevered free cash flow projections for both its AeroVanc (U.S.) and PAP (Worldwide) product candidates and then applied a probability of success adjustment based on PAREXEL s R&D Sourcebook probabilities of clinical success in Phase 1, Phase 2, Phase 3 and NDA stages of development. The future cash flows plus the terminal value of such cash flows are discounted by the WACC, to derive a present value.

In conducting its discounted cash flow analysis for the purpose of determining the enterprise value of Savara, Roth applied the projected unlevered free cash flow that Savara is expected to generate during fiscal years 2017 to 2032 from its AeroVanc (U.S.) and PAP (Worldwide) programs based upon financial projections prepared by Savara s management. Terminal values based on declining cash flow at a rate of 3.0% to 7.0% were applied to management s cash flow estimates in year 2032 to complete the basis for calculating the present value of future free cash flows. The future free cash flows are then discounted by the WACC, to derive a present value. In selecting an appropriate

discount rate, Roth took into account the industry s unlevered equity beta of 1.23, Savara s debt to equity ratio of 0.0%, levered beta of 1.23, the equity risk premium of 19% based on Duff & Phelps 2015 Valuation Handbook, the risk free rate of 2.4% for 10-year U.S. treasury securities, pre-tax cost of debt of 7.1% (average of comparable companies), Savara s tax rate assumption of 34.0%, Mast s equity to total capitalization of 100.0% and its debt to total capitalization of 0.0%. Application of the foregoing principles resulted in a 25.8% WACC. Roth performed a sensitivity analysis in both cases using discount rates from 24.0% to 26.0% to arrive at a range of present values.

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Based on the foregoing, Roth computed an enterprise value range of $123.3 million to $150.2 million for Savara s AeroVanc (U.S.) program and $59.2 million to $73.8 million for Savara s PAP (Worldwide) program. In evaluating the foregoing, it should be noted that the WACC does not take into consideration the specific firm risks such as bankruptcy. As a result, Savara s true WACC may be higher when taking into consideration the risks of default and negative operating profit history of the business which would have the effect of reducing the enterprise value range. By conducting an analysis of a range of discount rates rather than relying one specific WACC, Roth is comfortable that the analysis is appropriate.

Savara Inc.

Discounted Cash Flow Analysis AeroVanc (U.S.)

($ in millions)

	2017	2018	2019	2020	2021	2022	2023	2024
Revenue Projections	$ 0.0	$ 0.0	$ 0.0	$ 58.0	$ 125.1	$ 202.5	$ 291.3	$ 392.6
YoY Growth					*116%*	*62%*	*44%*	*35%*
Free Cash Flow[1]	($ 12.5)	($ 11.5)	($ 6.9)	$ 27.8	$ 69.1	$ 116.5	$ 171.2	$ 233.6
Probability of Success Adjustment[2]				38.5%	38.5%	38.5%	38.5%	38.5%
Free Cash Flow (Risk Adjusted)	**($ 12.5)**	**($ 11.5)**	**($ 6.9)**	**$ 10.7**	**$ 26.6**	**$ 44.9**	**$ 65.9**	**$ 89.9**

	2025	2026	2027	2028	2029	2030	2031	2032
Revenue Projections	$ 416.2	$ 440.9	$ 466.8	$ 494.1	$ 522.6	$ 552.4	$ 583.6	$ 616.2
YoY Growth	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*
Free Cash Flow[1]	$ 252.2	$ 267.6	$ 283.8	$ 300.7	$ 318.5	$ 337.1	$ 356.5	$ 376.9
Probability of Success Adjustment[2]	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%
Free Cash Flow (Risk Adjusted)	**$ 97.1**	**$ 103.0**	**$ 109.3**	**$ 115.8**	**$ 122.6**	**$ 129.8**	**$ 137.3**	**$ 145.1**

	Declining Growth Terminal Value Methodology				Declining Growth Method		
	NPV of Cash Flows	PV of Terminal Value Declining Growth Method			NPV+Terminal Value		
Discount Rate	(2017-2032)	3%	5%	7%	3%	5%	7%
24.0%	$ 129.5	$ 20.7	$ 18.9	$ 17.3	$ 150.2	$ 148.4	$ 146.8
24.5%	$ 124.4	$ 19.1	$ 17.5	$ 16.0	$ 143.6	$ 141.9	$ 140.5
25.0%	$ 119.6	$ 17.7	$ 16.2	$ 14.8	$ 137.3	$ 135.8	$ 134.4
25.5%	$ 114.9	$ 16.4	$ 15.0	$ 13.8	$ 131.3	$ 129.9	$ 128.7
26.0%	$ 110.5	$ 15.2	$ 13.9	$ 12.8	$ 125.6	$ 124.4	$ 123.3

Note: (1) FY2017 - FY2032 figures are based on discussions with Savara management.

(2) Probability of Success (PoS) adjustment based on PAREXEL s R&D Sourcebook probabilities of clinical in Phase 1, Phase 2, Phase 3, and NDA respectively; PoS adjustment applied to cash flows subject to clinical development risk

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Savara Inc.

Discounted Cash Flow Analysis PAP (Worldwide)

($ in millions)

	2017	2018	2019	2020	2021	2022	2023	2024
Revenue Projections	$ 0.8	$ 0.0	$ 0.0	$ 15.2	$ 22.1	$ 64.4	$ 119.1	$ 179.1
YoY Growth					*45%*	*191%*	*85%*	*50%*
Free Cash Flow[1]	($ 14.6)	($ 7.0)	($ 7.2)	$ 10.6	$ 20.3	$ 49.0	$ 85.1	$ 124.8
Probability of Success Adjustment[2]	0.0%	0.0%	50.0%	38.5%	38.5%	38.5%	38.5%	38.5%
Free Cash Flow (Risk Adjusted)	**($ 14.6)**	**($ 7.0)**	**($ 3.6)**	**$ 4.1**	**$ 7.8**	**$ 18.9**	**$ 32.8**	**$ 48.0**

	2025	2026	2027	2028	2029	2030	2031	2032
Revenue Projections	$ 238.6	$ 291.1	$ 300.2	$ 309.7	$ 313.2	$ 290.5	$ 266.0	$ 239.8
YoY Growth	*33%*	*22%*	*3%*	*3%*	*1%*	*-7%*	*-8%*	*-10%*
Free Cash Flow[1]	$ 164.0	$ 198.6	$ 204.5	$ 210.6	$ 212.8	$ 197.6	$ 181.2	$ 163.6
Probability of Success Adjustment[2]	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%	38.5%
Free Cash Flow (Risk Adjusted)	**$ 63.1**	**$ 76.5**	**$ 78.7**	**$ 81.1**	**$ 81.9**	**$ 76.1**	**$ 69.8**	**$ 63.0**

	Declining Growth Terminal Value Methodology				Declining Growth Method		
	NPV of Cash Flows	PV of Terminal Value Declining Growth Method			NPV+Terminal Value		
Discount Rate	(2017-2032)	3%	5%	7%	3%	5%	7%
24.0%	$ 64.8	$ 9.0	$ 8.2	$ 7.5	$ 73.8	$ 73.0	$ 72.3
24.5%	$ 61.9	$ 8.3	$ 7.6	$ 6.9	$ 70.2	$ 69.4	$ 68.8
25.0%	$ 59.0	$ 7.7	$ 7.0	$ 6.4	$ 66.7	$ 66.0	$ 65.4
25.5%	$ 56.3	$ 7.1	$ 6.5	$ 6.0	$ 63.4	$ 62.8	$ 62.2
26.0%	$ 53.7	$ 6.6	$ 6.0	$ 5.5	$ 60.2	$ 59.7	$ 59.2

Note: (1) FY2017 - FY2032 figures are based on discussions with Savara management.
(2) Probability of Success (PoS) adjustment based on PAREXEL s R&D Sourcebook probabilities of clinical in Phase 1, Phase 2, Phase 3, and NDA respectively; PoS adjustment applied to cash flows subject to clinical development risk

As discussed above, Roth performed a variety of financial and comparative analyses for the purpose of rendering its opinion. While the preceding summary describes several analyses and examinations that Roth deems material to its evaluation and opinion, they are not a comprehensive description of all analyses and examinations actually conducted by Roth.

General

Roth is a nationally recognized investment banking firm that provides financial advisory services and is continually engaged in the valuation of businesses and their securities in connection with mergers and acquisitions, negotiated underwritings, secondary distributions of listed and unlisted securities, private placements and valuations for estate, corporate and other purposes. The Mast Board retained Roth to render an opinion as to the fairness to Mast, from a financial point of view, of the consideration to be paid in the Merger by Mast based upon the foregoing qualifications, experience and expertise.

Mast paid Roth a fee of $250,000 for rendering its fairness opinion delivered in connection with the Merger. The $250,000 opinion fee was not contingent in whole or in part on the success of the Merger, or on the results of

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Roth s evaluation and analysis or upon the conclusions reached in Roth s opinion. In addition, Mast agreed to reimburse Roth up to $10,000 for its reasonable, documented, out-of-pocket expenses, including reasonable fees and disbursements of its counsel. Mast has also agreed to indemnify Roth against certain liabilities and other items that may arise out of the Mast s engagement of Roth. The Mast Board did not limit Roth in any way in the investigations it made or the procedures it followed in rendering its opinion.

Roth in the past has provided and may in the future provide investment banking and other financial services to Mast and its affiliates for which Roth and its affiliates have received or may receive compensation. In February 2016, Roth acted as the sole bookrunning manager of a public offering by Mast of shares of its common stock and warrants and received substantial fees in connection therewith. Roth is a full service securities firm engaged in securities trading and brokerage activities, as well as providing investment banking and other financial services. In the ordinary course of business, Roth and its affiliates may actively trade securities of Mast for its own account or the accounts of its customers and, accordingly, may at any time hold a long or short position in such securities.

Consistent with applicable legal and regulatory requirements, Roth has adopted policies and procedures to establish and maintain the independence of its research departments and personnel. As a result, Roth s research analysts may hold views, make statements or investment recommendations and/or publish research reports with respect to Mast, Savara and/or the Merger that differ from the views of its investment banking personnel.

Information Regarding Financial Projections Used for Fairness Opinion Analysis

The forward looking financial information of Mast and Savara used in the discounted cash flow analyses referenced in the Roth fairness opinion was not prepared with a view towards compliance with published guidelines of the SEC or the guidelines established by the American Institute of Certified Public Accountants for preparation, presentation of prospective financial information. Such forward looking financial information included in this proxy statement/prospectus/information statement is the responsibility of the management of Mast or Savara, as applicable, who prepared the information. PricewaterhouseCoopers LLP has neither examined, compiled nor performed any procedures with respect to this forward looking financial information and, accordingly, PricewaterhouseCoopers LLP does not express an opinion or any other form of assurance with respect thereto. The PricewaterhouseCoopers LLP reports included in this proxy statement/prospectus/information statement relate solely to the historical financial information. They do not extend to the forward looking financial information and should not be read to do so.

Interests of the Mast Directors and Executive Officers in the Merger

In considering the recommendation of the Mast Board that you vote to approve the proposal to adopt the merger agreement, you should be aware that Mast s directors and executive officers have interests in the merger that are different from, or in addition to, those of Mast s stockholders generally. The Mast Board was aware of and considered these interests, among other matters, in evaluating and negotiating the merger agreement and the mergers, and in recommending that the merger agreement be adopted by Mast s stockholders.

Severance, Equity Vesting and Bonus Payments

Material Severance Terms Pertaining to Named Executive Officers

In March 2016, the Mast Board approved, and Mast entered into, new severance agreements with each of the executive officers of Mast, including the named executive officers of Mast (each a Mast NEO and collectively the Mast NEOs). These severance agreements replaced and superseded each executive officer s pre-existing severance arrangements. The tables below summarize the material terms of the current severance agreements.

In particular Mast notes the following:

The payment of severance benefits to any of the Mast NEOs is, in all cases, conditioned upon Mast s receipt of a general release of claims from the Mast NEO that becomes effective.

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Stock option awards have double-trigger change in control provisions, such that if outstanding awards held by the Mast NEOs are assumed by a successor in connection with a change in control of Mast, such awards will not automatically vest solely as a result of the change in control; and

No excise tax gross-ups are provided upon change in control.

Potential Benefits upon Change in Control of Mast

The following table summarizes the benefits for which the Mast NEOs would be eligible pursuant to their executive severance agreements with Mast in the event their employment is terminated without cause or they resign for good reason prior to or within 24 months of the change in control of Mast.

Officer		**March 2016 Severance Agreement**
Brian M. Culley	*Cash*	Lump sum payment equal to 24 months of current base salary
	Benefits	Lump sum payment equal to premiums for continued health insurance coverage for 24 months
	Equity	No single trigger vesting acceleration Double trigger benefits: 100% vesting acceleration and extension of exercise period to 10 years from option grant date
Edwin L. Parsley	*Cash*	Lump sum payment equal to 9 months of current base salary
	Benefits	Lump sum payment equal to premiums for continued health insurance coverage for 9 months
	Equity	Double trigger benefits: 100% vesting acceleration and extension of exercise period to 10 years from option grant date
Brandi L. Roberts	*Cash*	Lump sum payment equal to 9 months of current base salary
	Benefits	Lump sum payment equal to premiums for continued health insurance coverage for 9 months
	Equity	Double trigger benefits: 100% vesting acceleration and extension of exercise period to 10 years from option grant date

Defined Terms for Purposes of Executive Severance Agreements

Under the March 2016 severance agreements:

Cause means (a) any act of personal dishonesty taken by the executive in connection with the executive s responsibilities as an employee which is intended to result in substantial personal enrichment of the executive; (b) the executive s conviction of a felony that the Mast Board reasonably believes has had or will have a material detrimental effect on the reputation or business of Mast or of the affiliates of Mast; (c) a willful act by the executive that constitutes misconduct and is materially injurious to Mast or to the affiliates of Mast; (d) any material breach by the executive of any offer letter or confidential information, non-solicitation or invention assignment agreement or other agreement entered into with Mast; or

(e) continued willful violations by the executive of the executive s obligations to Mast or to the affiliates of Mast after there has been delivered to the executive a written demand for performance that describes the basis for Mast s belief that the executive has not substantially performed the executive s duties.

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Good reason means, in each case, without the executive s express written consent, (a) a material reduction or alteration of the executive s duties, position or responsibilities relative to those in effect immediately prior to such reduction or alteration, or the executive s removal from such position, duties or responsibilities; (b) a material reduction of the executive s base salary as in effect immediately prior to such reduction (unless pursuant to a salary reduction program applicable generally to similarly situated employees); or (c) the relocation of the executive s principal place of employment with Mast by more than 50 miles. The severance agreements provide Mast with a 30-day cure period following written notice from an executive of the occurrence of an event that otherwise would constitute good reason and the executive must have provided that notice to Mast within 90 days of the executive s awareness of the initial existence of the applicable event.

Change in control has the meaning ascribed to it in the Mast 2015 Omnibus Incentive Plan, as amended. Generally, under the Mast 2015 Omnibus Incentive Plan, a change in control occurs upon (a) the consummation of a merger or consolidation of Mast with or into another entity, (b) the consummation of the sale, transfer or other disposition of all or substantially all of Mast s assets, (c) certain changes in the majority of the Mast Board within a period of 36 consecutive months, (d) the acquisition, pursuant to a tender or exchange offer made directly to Mast s stockholders that the Mast Board does not recommend, of more than 50% of the total combined voting power in Mast s outstanding securities, or (e) approval by Mast stockholders of a plan of complete liquidation or dissolution.

Cash and Restricted Stock Unit Awards

On January 17, 2017, the Mast Board, upon the recommendation of its compensation committee, made the compensation-related decisions described below in furtherance of retaining, rewarding and incentivizing Mast s remaining employees continuing efforts to help Mast achieve its goals through the merger (including consummation of the merger) and to obtain agreement and clarity regarding the effect of the anticipated change in control of Mast pursuant to the Merger Agreement on outstanding stock options held by Mast s current employees and non-employee directors. The Mast Board s compensation-related decisions on January 17, 2017 included that there would be no base salary increases and no awards under Mast s 2016 executive Incentive Plan.

2017 Retention/Performance Bonus

The Mast Board approved a retention/performance bonus payable 50% in a single sum cash payment and 50% in a grant of RSUs for Mast s executive officers, including the Mast NEOs, with payment of the cash award and vesting of the RSUs contingent upon consummation of the merger on or before July 6, 2017, the officer s continued service with Mast until that event, and the officer s delivery of a general release of claims in Mast s favor. The amounts of these awards are as set forth in the table below.

Executive Officer	Cash Award ($)	RSU Award (# of units)
Brian Culley, CEO	53,575	382,679
Brandi Roberts, CFO	27,300	195,000
Edwin Parsley, CMO	31,900	227,859
Shana Hood, General Counsel	24,500	175,000

The RSUs were granted under Mast s stockholder-approved 2015 Omnibus Incentive Plan. Each RSU represents a right to receive one share of Mast s common stock. The number of RSUs granted to each executive officer is the quotient of the amount of the cash award for the officer divided by the closing sales price of Mast s common stock on

the date the Mast Board approved these awards, which was $0.14 per share.

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Restricted Stock Units Awards

The Mast Board approved additional RSUs for the Mast executive officers, including the Mast NEOs, as set forth in the table below:

Executive Officer	RSU Award (# of units)
Brian Culley	1,985,515
Brandi Roberts	694,926
Edwin Parsley	666,713
Shana Hood	278,556

In accordance with the notices of grant and agreements governing these awards, the RSUs were granted under Mast s 2015 Omnibus Incentive Plan and will vest in full if the executive officer is providing services to Mast on the date the merger is consummated (provided such date occurs on or before July 6, 2017) or immediately prior to such date. In addition, in accordance with the governing documents for the RSUs, all of the outstanding and unexercised stock options held by the officers will be cancelled immediately prior to, but contingent upon, the consummation of the merger and cease to be exercisable as of such date without any accelerated vesting.

Golden Parachute Compensation

The following table and related footnotes present information about the compensation payable to Mast s executive officers, including the Mast NEOs, in connection with the merger and their associated termination without cause from Mast. The compensation shown in the table below is intended to comply with Item 402(t) of Regulation S-K, which requires disclosure of information about compensation for each named executive officer that is based on or otherwise relates to the merger.

Mast s executive officers are not entitled to any pension or non-qualified deferred compensation benefits or enhancements or any tax reimbursements in connection with the merger.

Named Executive Officer	Cash ($)(1)	Equity ($)(2)	Pension/ NDQC ($)	Perquisites/ Benefits ($)(3)	Tax Reimbursements ($)	Other ($)(4)	Total ($)
Brian Culley	857,200	350,493		66,319		53,575	1,327,587
Brandi Roberts	234,000	131,709		16,372		27,300	409,381
Edwin Parsley	273,431	132,397		24,391		31,900	462,119
Shana Hood	210,000	67,126		24,391		24,500	326,017

(1) Amounts in this column represent lump sum severance payable in accordance with the officer s executive severance agreement with Mast upon termination without cause, which are equal to 24 months of base salary for Mr. Culley and nine months of base salary for the other executive officers.

(2) As discussed above, as a condition to receiving the RSUs granted in January 2017, Mast s executive officers agreed that, to the extent they are not vested as of immediately prior to the consummation of the merger, their outstanding stock option awards will be cancelled and cease to be exercisable as of such date without any

accelerated vesting. Accordingly, this column does not reflect any value for acceleration of their stock option awards because vesting will not be accelerated in connection with the merger. The amounts in this column are the aggregate dollar value of the RSUs granted to the executive officers, which will vest in full upon the consummation of the merger, calculated using the average closing market price of Mast s common stock over the first five business days following the first public announcement of the merger, which average price is $0.148 per share.

(3) Amounts equal the premiums necessary to continue under COBRA the health insurance coverage in effect for each executive officer prior to termination under the terms of their respective executive severance agreements in the event the officers are terminated without cause regardless of whether the merger occurs.

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For Mr. Culley the amount payable is equal to 24 months of such premiums and the amounts payable to the other executive officers is equal to nine months of such premiums.

(4) Amounts represent the cash bonuses payable contingent upon consummation of the merger, as approved the Mast Board in January 2017 and discussed in more detail above under 2017 Retention/Performance Bonus.

Acceleration of Director Equity Awards

On January 20, 2017, the Mast Board, upon the recommendation of its compensation committee, approved a grant of RSUs to each non-employee director under Mast s 2015 Omnibus Incentive Plan in the amounts set forth in the table below. The RSUs will vest in full if the director is providing services to Mast on the date the merger is consummated (provided such date occurs on or before July 6, 2017) or immediately prior to such date. In addition, in accordance with the governing documents for the RSUs, all of the outstanding and unexercised stock options held by the directors will be cancelled immediately prior to, but contingent upon, the consummation of the merger and cease to be exercisable as of such date without any accelerated vesting.

Name	RSU Award (# of units)
Howard Dittrich	63,933
Peter Greenleaf	45,535
Matthew Pauls	45,535
David A. Ramsay	79,962

Ownership Interest

As of February 2, 2017, the directors and executive officers of Mast beneficially owned 3.6% of the outstanding shares of Mast common stock, 98% of which is represented by the outstanding stock options held by the directors and executive officer of Mast, which stock options, to the extent not exercised, will be cancelled and cease to be exercisable immediately prior to the consummation of the merger. As of February 2, 2017, the directors and executive officers of Mast, together with their affiliates, owned less than 1% of the outstanding shares of Mast common stock. See Principal Stockholders of Mast for more information.

Indemnification of the Mast Officers and Directors

The Merger Agreement provides that, for a period of six years following the effective time of the merger, Mast will, to the fullest extent permitted by Delaware law, indemnify and hold harmless all individuals who are present or former directors and officers or who become, prior to the effective date of the merger, director or officers of Mast or Savara, against all claims, losses, liabilities, damages, judgments, fines and reasonable fees, costs and expenses, including attorneys fees and disbursements, incurred in connection with any claim, action, suit, proceeding or investigation, whether civil, criminal, administrative or investigative, arising out of or pertaining to the fact that such person is or was a director or officer of Mast or Savara. In addition, for a period of six years following the effective time of the merger, the certificate of incorporation and bylaws of Mast will contain provisions no less favorable with respect to indemnification of present and former directors and officers of Savara than are presently set forth in the certificate of incorporation and bylaws of Mast.

The Merger Agreement also requires that Mast purchase an insurance policy which maintains in effect for six years from the closing the current directors and officers liability insurance policies currently maintained by Mast; provided, that Mast may substitute such policies with policies of at least the same coverage containing terms and conditions that are not materially less favorable.

Interests of Certain Savara Directors, Executive Officers and Affiliates in the Merger

In considering the recommendation of the Savara Board with respect to adopting the Merger Agreement, Savara stockholders should be aware that certain members of the board of directors and executive officers of

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Savara have interests in the merger that may be different from, or in addition to, interests they may have as Savara stockholders. The Savara Board was aware of these potential conflicts of interest and considered them, among other matters, in reaching its decision to approve the Merger Agreement and the merger, and to recommend, that the Savara stockholders sign and return the written consent as contemplated by this proxy statement/prospectus/information statement.

Ownership Interests. Certain of Savara s directors and executive officers currently hold shares of Savara s common stock, Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock. In addition, certain of Savara s directors will acquire additional shares of common stock prior to the closing of the merger pursuant to the conversion of their subordinated convertible promissory notes into shares of common stock. The table below sets forth the ownership of Savara s common stock, Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock as of December 31, 2016 by Savara s directors and executive officers and their anticipated ownership of Savara common stock, Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock immediately prior to the closing of the merger following the conversion of their subordinated convertible promissory notes into shares of common stock.

Stockholder Name	Number of Shares of Common Stock as of December 31, 2016	Number of Shares of Preferred Stock as of December 31, 2016	Number of Shares of Common Stock Immediately Prior to the Merger(2)
Robert Neville	527,271	128,079	655,350
Nevan Elam			
Richard J. Hawkins			
Yuri Pikover(1)		452,462	452,462
Joseph S. McCracken		6,590	6,590
Taneli Jouhikainen	383,036	603	383,639
David Lowrance			

(1) Shares held by 37Ventures, LLC. Yuri Pikover is a managing director of 37Ventures, LLC.
(2) Does not include any shares issuable upon conversion of convertible promissory notes issued in the 2016 Convertible Debt Financing, which are expected to convert at the closing of the merger.

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Stock Options and Warrants. Certain of Savara s directors and executive officers currently hold options, subject to vesting, and warrants to purchase shares of Savara capital stock, which pursuant to the Merger Agreement will be converted into and become options and warrants to purchase shares of Mast common stock. The table below sets forth certain information with respect to such options.

Optionholder Name	Grant Date	Expiration Date	Exercise Price	Number of Shares of Common Stock Underlying Option as of December 31, 2016	Number of Vested Shares of Common Stock Underlying Option as of December 31, 2016
Robert Neville	09/14/12	09/14/22	$ 0.38	170,000	170,000
	12/16/14	12/16/24	$ 0.38	110,517	55,259
	12/15/15	12/15/25	$ 0.85	300,000	75,000
	12/15/16	12/15/26	$ 1.03	250,000	
Nevan Elam	02/20/09	02/20/19	$ 0.11	37,000	37,000
	12/17/10	12/17/20	$ 0.30	5,000	5,000
	08/30/11	08/30/21	$ 0.30	3,906	3,906
	12/16/11	12/16/21	$ 0.32	2,000	2,000
	12/14/12	12/14/22	$ 0.38	2,000	2,000
	12/13/13	12/13/23	$ 0.48	18,500	18,500
	07/24/14	07/24/24	$ 0.48	3,000	2,250
	12/15/15	12/15/25	$ 0.85	10,000	3,333
	12/15/16	12/15/26	$ 1.03	18,500	
Richard J. Hawkins	10/22/10	10/22/20	$ 0.30	37,000	37,000
	12/17/10	12/17/20	$ 0.30	1,000	1,000
	08/30/11	08/30/21	$ 0.30	3,906	3,906
	12/16/11	12/16/21	$ 0.32	2,000	2,000
	12/14/12	12/14/22	$ 0.38	2,000	2,000
	12/12/13	12/12/23	$ 0.48	18,500	18,500
	07/24/14	07/24/24	$ 0.48	3,000	2,250
	12/15/15	12/15/25	$ 0.85	10,000	3,333
	12/15/16	12/15/26	$ 1.03	18,500	
Yuri Pikover	11/27/13	11/27/23	$ 0.48	37,000	37,000
	7/24/14	07/24/24	$ 0.48	5,000	3,750
	12/15/15	12/15/25	$ 0.85	10,000	3,333
	12/15/16	12/15/26	$ 1.03	18,500	
Joseph S. McCracken	11/27/13	11/27/23	$ 0.48	37,000	37,000
	7/24/14	07/24/24	$ 0.48	5,000	3,750
	12/15/15	12/15/25	$ 0.85	10,000	3,333
	12/15/16	12/15/26	$ 1.03	18,500	
Taneli Jouhikainen	12/14/12	12/14/22	$ 0.38	90,000	

	12/15/15	12/15/25	$	0.85	300,000	75,000
	12/15/16	12/15/26	$	1.03	250,000	
David Lowrance	10/25/16	10/25/26	$	0.88	217,710	

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The table below sets forth certain information with respect to such warrants.

Warrant holder Name	Expiration Date	Exercise Price	Number of Shares of Capital Stock Underlying Warrant as of December 31, 2016
Robert Neville	05/30/17	$ 3.12959	1,249
Yuri Pikover(1)	06/30/21	$ 5.2605	1,426
Joseph S. McCracken	06/30/21	$ 5.2605	713
Taneli Jouhikainen	05/30/17	$ 3.12959	58

(1) Warrants held by 37Ventures, LLC. Yuri Pikover is a managing director of 37Ventures, LLC.

Management Following the Merger. As described elsewhere in this proxy statement/prospectus/information statement, including in Management Following the Merger, Mast must take all actions to cause the Mast Board, immediately after the effective time of the merger, to consist of five members designated by Savara and two independent directors as designated by Mast. Each new member of the Mast Board that was not a member of the Mast Board immediately prior to the effective time of the merger will enter into an indemnification agreement with Mast, on a form to be agreed-upon between Mast and Savara, within 15 days of their appointment. The executive officers of Mast immediately after the effective time will be designated by Savara.

Indemnification and Insurance. Under the Merger Agreement, from and after the closing of the merger, Mast and Savara, as the surviving corporation in the merger, must fulfill and honor in all respects the obligations of Mast and Savara existing prior to the date of the Merger Agreement to indemnify Mast and Savara s present and former directors and officers and their heirs, executors and assigns. In addition, each Savara officer and director who becomes and officer or director of Mast will enter into Mast s standard indemnification agreement.

Under the Merger Agreement, the certificate of incorporation and bylaws of Savara, as the surviving corporation in the merger, shall contain provisions at least as favorable with respect to indemnification and elimination of liability for monetary damages as are presently set forth in the certificate of incorporation and bylaws of Savara, and the provisions relating to the indemnification and elimination of liability for monetary damages set forth in the certificate of incorporation and bylaws of Mast and Savara shall not be amended, repealed or otherwise modified for a period of six years time from the closing of the merger in a manner that would adversely affect the rights thereunder of individuals who, at or prior to the closing, were officers, directors, employees or agents of Mast or Savara.

The Merger Agreement also provides that Mast will purchase an insurance policy, which maintains in effect for six years from the closing the current directors and officers liability insurance policies maintained by Mast, and Savara may purchase an insurance policy, which maintains in effect for six years from the closing the current directors and officers liability insurance policies maintained by Savara.

Limitations of Liability and Indemnification

In addition to the indemnification required in the amended and restated certificate of incorporation and amended and restated bylaws of Mast, Mast entered into indemnification agreements with each of its directors and officers. These agreements provide for the indemnification of the directors and officers of Mast for all reasonable expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were agents of Mast. Mast believes that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

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Stock Options, Restricted Stock and Warrants

As of December 31, 2016, an aggregate of 3,096,665 shares of Savara common stock were issuable upon the exercise of outstanding stock options under Savara s Stock Option Plan, an aggregate of 992,563 Savara Restricted Shares were outstanding under Savara s Stock Option Plan and an aggregate of 415,851 shares of Savara capital stock were issuable upon the exercise of outstanding warrants.

At the effective time of the merger, each option to purchase Savara common stock that is outstanding and unexercised immediately prior to the effective time of the merger under Savara s Stock Option Plan (each, a Savara Option), whether vested or not vested, will be converted into and become an option to purchase Mast common stock (each, a Mast Option) and each Mast Option may be exercised solely for shares of Mast common stock. The number of shares of Mast common stock subject to each Mast Option will be determined by multiplying (i) the number of shares of Savara common stock that were subject to the underlying Savara Option by (ii) the exchange ratio, with the resulting number rounded down to the nearest whole number of shares of Mast common stock. The per share exercise price for the Mast common stock subject to such Mast Option will be determined by dividing (i) the per share exercise price of the underlying Savara Option by (ii) the exchange ratio, with the resulting number rounded up to the nearest whole cent.

At the effective time, each share of Savara common stock that is unvested and outstanding immediately prior to the effective time of the merger under Savara s Stock Option Plan (each, a Savara Restricted Share) will be exchanged for a restricted share of Mast (each, a Mast Restricted Share) and each Mast Restricted Share will have, and be subject to, the same terms and conditions (including vesting terms) set forth in Savara s Option Plan and applicable Savara Restricted Share agreements relating thereto, as in effect immediately prior to the effective time of the merger. The number of Mast Restricted Shares that will be exchanged for an award of Savara Restricted Shares will equal the number of Savara Restricted Shares outstanding subject to such award immediately prior to the effective time of the merger multiplied by the exchange ratio, with the result rounded down to the nearest whole number of shares of Mast common stock.

At the effective time of the merger, each warrant to purchase Savara common stock that is outstanding and unexercised immediately prior to the effective time of the merger (each, a Savara Warrant), will be converted into and become a warrant to purchase Mast common stock (each, a Mast Warrant) and each Mast Warrant may be exercised solely for shares of Mast common stock. The number of shares of Mast common stock subject to each Mast Warrant will be determined by multiplying (i) the number of shares of Savara common stock that were subject to the underlying Savara Warrant by (ii) the exchange ratio, with the resulting number rounded down to the nearest whole number of shares of Mast common stock. The per share exercise price for the Mast common stock subject to such Mast Warrant will be determined by dividing (i) the per share exercise price of the underlying Savara Warrant by (ii) the exchange ratio, with the resulting number rounded up to the nearest whole cent.

Form of the Merger

The Merger Agreement provides that at the effective time, Merger Sub will be merged with and into Savara. Upon the consummation of the merger, Savara will continue as the surviving corporation and will be a wholly owned subsidiary of Mast.

In connection with the merger, assuming Mast Proposal No. 3 is approved by Mast stockholders at the Mast special meeting, Mast will be renamed Savara Inc. and expects to trade on the NYSE MKT under the symbol SVRA.

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Merger Consideration

At the effective time of the merger:

- each share of Savara capital stock outstanding immediately prior to the effective time of the merger will automatically be converted into the right to receive approximately [ ] pre-split (or [ ] post-split) shares of Mast common stock,
- each Savara Option will be assumed by Mast and will become an option to purchase shares of Mast common stock; and
- each warrant to purchase shares of Savara capital stock outstanding and unexercised immediately prior to the effective time of the merger will be assumed by Mast and will become a warrant to purchase shares of Mast common stock.

Immediately after the merger, based on the exchange ratio, it is expected that Savara stockholders, warrantholders and optionholders will own approximately 76% of the fully-diluted common stock of Mast with Mast stockholders and optionholders holding approximately 24% of the fully-diluted common stock of Mast. The exchange ratio is determined pursuant to a formula described in more detail in the Merger Agreement and in this proxy statement/prospectus/information statement, and the [ ] pre-split figure, [ ] post-split figure and percentage ownership figures are estimates.

There will be no adjustment to the total number of shares of Mast common stock that Savara stockholders will be entitled to receive for changes in the market price of Mast common stock. Accordingly, the market value of the shares of Mast common stock issued pursuant to the merger will depend on the market value of the shares of Mast common stock at the time the merger closes, and could vary significantly from the market value on the date of this proxy statement/prospectus/information statement.

No fractional shares of Mast common stock will be issuable pursuant to the merger to Savara stockholders. Instead, each Savara stockholder who would otherwise be entitled to receive a fraction of a share of Mast common stock, after aggregating all fractional shares of Mast common stock issuable to such stockholder, will be entitled to receive in cash the dollar amount, rounded down to the nearest whole cent, without interest, determined by multiplying such fraction by the average closing price of a share of Mast common stock as quoted on the NYSE MKT for the ten consecutive trading days ending with the second to last trading day immediately preceding the date the merger becomes effective.

The Merger Agreement provides that, as soon as practicable after the effective time of the merger, Mast will deposit with Mast s transfer agent or another reputable bank or trust company reasonably acceptable to Savara (the Exchange Agent), (i) non-certificated shares of Mast common stock represented by book-entry representing the shares of Mast common stock issuable to the Savara stockholders and (ii) a sufficient amount of cash to make payments in lieu of fractional shares.

The Merger Agreement provides that, as soon as reasonably practicable after the effective time of the merger, Mast will cause the Exchange Agent to mail to each record holder of Savara capital stock immediately prior to the effective time of the merger a letter of transmittal and instructions for surrendering and exchanging the record holder s Savara stock certificates for non-certificated shares of Mast common stock. Upon surrender of a Savara stock certificate for

exchange to the Exchange Agent, together with a duly signed letter of transmittal and such other documents as the Exchange Agent or Mast may reasonably require, the Savara stock certificate surrendered will be cancelled and the holder of the Savara stock certificate will be entitled to receive the following:

non-certificated shares of Mast common stock represented by book-entry equal to the number of whole shares of Mast common stock that such holder has the right to receive pursuant to the provisions of the Merger Agreement; and

cash in lieu of any fractional share of Mast common stock.

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At the effective time of the merger, all holders of certificates representing shares of Savara common stock or Savara preferred stock that were outstanding immediately prior to the effective time of the merger will cease to have any rights as stockholders of Savara. In addition, no transfer of Savara common stock or Savara preferred stock after the effective time of the merger will be registered on the stock transfer books of Savara. From and after the effective time of the merger, until it is surrendered, each certificate that previously evidenced Savara common stock or Savara preferred stock will be deemed to represent only the right to receive shares of Mast common stock, and cash in lieu of any fractional share of Mast common stock.

If any Savara stock certificate has been lost, stolen or destroyed, the Exchange Agent will require the owner of such lost, stolen or destroyed certificate to deliver an affidavit claiming such certificate has been lost, stolen or destroyed and post a bond indemnifying the Exchange Agent, Mast and Savara as the surviving corporation against any claim suffered by such parties related to the lost, stolen or destroyed certificate.

If any shares of Savara capital stock outstanding immediately prior to the effective time of the merger are unvested or subject to a repurchase option, risk of forfeiture or other condition under any applicable restricted stock purchase agreement or other similar agreement, then the shares of Mast common stock issued in exchange for such shares of Savara capital stock will also be unvested and subject to the same repurchase option, risk of forfeiture or other condition, and the book-entry representing such shares of Mast common stock may accordingly be marked with appropriate legends.

Effective Time of the Merger

The Merger Agreement requires the parties to consummate the merger after all of the conditions to the consummation of the merger contained in the Merger Agreement are satisfied or waived, including the adoption of the Merger Agreement by the stockholders of Savara and the approval by the Mast stockholders of the issuance of Mast common stock, the amendment and restatement of the amended and restated certificate of incorporation of Mast effecting (i) the proposed 1-for-[ ] reverse stock split and (ii) the name change from Mast Therapeutics, Inc. to Savara Inc. The merger will become effective upon the filing of a certificate of merger with the Secretary of State of the State of Delaware or at such later time as is agreed by Mast and Savara and specified in the certificate of merger. Neither Mast nor Savara can predict the exact timing of the consummation of the merger.

Regulatory Approvals

In the United States, Mast must comply with applicable federal and state securities laws and the rules and regulations of the NYSE MKT in connection with the issuance of shares of Mast common stock and the filing of this proxy statement/prospectus/information statement with the SEC.

Tax Treatment of the Merger

Mast and Savara intend the merger to qualify as a reorganization within the meaning of Section 368(a) of the Code. Each of Mast and Savara will use its reasonable best efforts to cause the merger to qualify as a reorganization within the meaning of Section 368(a) of the Code, and not to permit or cause any affiliate or any subsidiary of Mast or Savara to, take any action, fail to take any action, or cause any action to be taken which would reasonably be expected to cause the merger to fail to qualify as a reorganization under Section 368(a) of the Code. For a description of certain of the considerations regarding U.S. federal tax consequences of the merger, see the section entitled Considerations with Respect to U.S. Federal Income Tax Consequences of the Merger below.

Considerations with Respect to U.S. Federal Income Tax Consequences of the Merger

In the opinion of each of DLA Piper LLP (US), counsel to Mast, and WSGR, counsel to Savara, the following is a discussion of the material U.S. federal income tax consequences of the merger applicable to U.S.

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Holders (as defined below) who exchange their Savara common stock for Mast common stock in the merger, but does not purport in any manner to be a complete or otherwise material analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local, or foreign tax laws are not discussed. This discussion and the opinions of counsel referred to below are based on the Code, U.S. Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the Internal Revenue Service (the IRS) in effect as of the date of the merger. These authorities may change or be subject to differing interpretations. Any such change may be applied retroactively in a manner that could adversely affect a holder of Savara common stock.

This discussion assumes and is limited to U.S. Holders who hold their Savara common stock and will hold their shares of Mast common stock received in exchange therefor, as capital assets within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion is an overview of certain potential tax treatment and does not address all U.S. federal income tax consequences relevant to the particular circumstances of a Savara common stockholder. In addition, it does not address consequences relevant to holders of Savara common stock that are subject to particular U.S. or foreign tax rules, including, without limitation:

- persons subject to the alternative minimum tax or Medicare contribution tax on net investment income;
- persons whose functional currency is not the U.S. dollar;
- persons holding Savara common stock as part of a hedge, straddle, or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- persons who are not U.S. Holders;
- banks, insurance companies, and other financial institutions;
- mutual funds, real estate investment trusts or regulated investment companies;
- brokers, dealers, or traders in securities;
- partnerships, other entities or arrangements treated as partnerships for U.S. federal income tax purposes, and other pass-through entities (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell Savara common stock under the constructive sale provisions of the Code;

persons who hold or receive Savara common stock pursuant to the exercise of any employee stock options or otherwise as compensation;

persons who hold Savara common stock as qualified small business stock pursuant to Section 1202 of the Code;

persons holding Savara common stock who exercise dissenters rights; and

tax-qualified retirement plans.

For purposes of this discussion, a U.S. Holder is a beneficial owner of Savara common stock that, for U.S. federal income tax purposes, is or is treated as:

an individual who is a citizen or resident of the United States;

a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, any state thereof, or the District of Columbia;

an estate, the income of which is subject to U.S. federal income tax regardless of its source; or

a trust if either a court within the United States is able to exercise primary supervision over the administration of such trust and one or more United States persons (within the meaning of Section 7701(a)(30) of the Code) have the authority to control all substantial decisions of such trust, or the trust has a valid election in effect under applicable Treasury Regulations to be treated as a United States person for U.S. federal income tax purposes.

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Holders of Savara common stock that are not U.S. Holders may have different U.S. federal income tax consequences than those described below and are urged to consult their own tax advisors regarding the tax treatment of the merger to them under U.S. and non-U.S. tax laws.

If an entity treated as a partnership for U.S. federal income tax purposes holds Savara common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding Savara common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

In addition, the following discussion does not address the tax consequences of the merger under U.S. federal non-income, state, local and non-U.S. tax laws. Furthermore, the following discussion does not address any tax consequences of transactions effectuated before, after or at the same time as the merger, whether or not they are in connection with the merger, including, without limitation, (i) transactions in which Savara preferred stock is converted to Savara common stock and (ii) the tax consequences to holders of options, warrants or similar rights to purchase Savara common stock.

STOCKHOLDERS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE MERGER ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Material U.S. Federal Income Tax Considerations of the Merger

The merger has been structured to qualify as a reorganization within the meaning of Section 368(a) of the Code. In connection with the filing of the registration statement of which this proxy statement/prospectus/information statement is a part, DLA Piper LLP (US) will deliver to Mast and WSGR will deliver to Savara opinions that the statements under the caption The Merger Considerations with Respect to U.S. Federal Income Tax Consequences of the Merger constitute the opinions of DLA Piper LLP (US) and WSGR, respectively.

In rendering their opinions, counsel will assume that the statements and facts concerning the merger set forth in this proxy statement/prospectus/information statement and in the Merger Agreement, are true and accurate in all respects, and that the merger will be completed in accordance with this proxy statement/prospectus/information statement and the Merger Agreement. Counsels opinions will also assume the truth and accuracy at the completion of the merger of certain representations and covenants as to factual matters made by Mast, Savara and Merger Sub in tax representation letters provided to counsel, which will be delivered on the effective date of this proxy statement/prospectus/information statement. Moreover, counsels opinions will be based on certain factual assumptions, including the assumption that, if any Savara shareholders dissent from the merger, the aggregate number of dissenting shares they hold and the aggregate amount of cash paid to them will not equal or exceed such number and amount as would cause the merger to fail to constitute a reorganization. In addition, the tax opinions will be based on the law in effect on the date of the opinions and will assume that there will be no change in applicable law between such date and the time of the merger. If any of these assumptions is inaccurate, the tax consequences of the merger could differ from those described in this proxy statement/prospectus/information statement.

Completion of the merger is not conditioned upon the delivery of any additional opinions from counsel dated as of the closing date that the merger, or any other determinations as of such date, that the merger will qualify as a reorganization. In addition, no ruling from the IRS has been or will be requested in connection with the merger with

respect to the tax treatment. Opinions of counsel do not bind the courts or the IRS, nor will they preclude the IRS from adopting a position contrary to those expressed in the opinions. Subject to the

qualifications and assumptions described in this proxy statement/prospectus/information statement, the merger will be treated for U.S. federal income tax purposes as a reorganization within the meaning of Section 368(a) of the Code. Accordingly, the tax consequences to U.S. Holders of Savara common stock will be as follows:

- a U.S. Holder will not recognize gain or loss upon the exchange of Savara common stock for Mast common stock pursuant to the merger, except to the extent of cash received in lieu of a fractional share of Mast common stock as described below;

- a U.S. Holder s aggregate tax basis for the shares of Mast common stock received in the merger (including any fractional share interest for which cash is received) will equal the stockholder s aggregate tax basis in the shares of Savara common stock surrendered upon completion of the merger;

- the holding period of the shares of Mast common stock received by a U.S. Holder in the merger will include the holding period of the shares of Savara common stock surrendered in exchange therefor; and

- a U.S. Holder who receives cash in lieu of a fractional share of Mast common stock in the merger will generally recognize capital gain or loss in an amount equal to the difference between the amount of cash received instead of a fractional share and the stockholder s tax basis allocable to such fractional share.

Capital gains or losses recognized in the merger as described above generally will constitute long-term capital gain or loss if the U.S. Holder s holding period in the Savara common stock surrendered in the merger is more than one year as of the effective date of the merger. Long-term capital gains recognized by certain non-corporate U.S. Holders, including individuals, are currently subject to taxation at preferential rates. Short-term capital gains are taxed at rates applicable to ordinary income. The deductibility of capital losses is subject to limitations. In addition, for purposes of the above discussion of the bases and holding periods for shares of Savara common stock and Mast common stock, stockholders who acquired different blocks of Savara common stock at different times for different prices must calculate their gains and losses and holding periods separately for each identifiable block of such stock exchanged in the merger.

A Savara stockholder will be required to retain records pertaining to the merger. Each U.S. Holder who owned, immediately before the merger, at least one percent (by vote or value) of the total outstanding stock of Savara is required to attach a statement to their tax returns for the year in which the merger is consummated that contains the information listed in Treasury Regulation Section 1.368-3(b). Such statement must include the names and employer identification numbers of Mast and Savara, the date of the merger, the stockholder s tax basis in, and the fair market value of, such stockholder s Savara common stock surrendered in the merger.

If the merger fails to qualify as a reorganization within the meaning of Section 368(a) of the Code, then a U.S. Holder would recognize gain or loss upon the exchange of Savara common stock for Mast common stock equal to the difference between the fair market value, at the time of the merger, of the Mast common stock received in the merger (including any cash received in lieu of a fractional share) and such U.S. Holder s tax basis in the Savara common stock surrendered in the merger. Such gain or loss would be long-term capital gain or loss if the Savara common stock was held for more than one year at the time of the merger. In such event, the tax basis of Mast common stock received in the merger would equal its fair market value at the time of the merger and the holding period of such Mast common stock would commence the day after the merger. Savara stockholders are urged to consult their own tax advisors

regarding the possibility of the merger failing to qualify as a reorganization and the tax consequences of such event.

Information Reporting and Backup Withholding

Certain stockholders may be subject to information reporting and backup withholding (currently at a rate of 28%) in connection with the merger. Certain persons, including corporations, are exempt from backup withholding but may be required to demonstrate such status by providing appropriate documentation. Any amount withheld under the backup withholding rules is not an additional tax and may be refunded or credited

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against such stockholder s U.S. federal income tax liability provided that the required information is properly furnished by the Savara stockholder in a timely manner to the IRS.

THE PRECEDING DISCUSSION DOES NOT PURPORT TO BE A COMPLETE ANALYSIS OR DISCUSSION OF ALL OF THE MERGER S POTENTIAL TAX EFFECTS. U.S. HOLDERS OF SAVARA STOCK SHOULD CONSULT THEIR TAX ADVISORS AS TO THE SPECIFIC TAX CONSEQUENCES TO THEM OF THE MERGER, INCLUDING TAX RETURN REPORTING REQUIREMENTS, AND THE APPLICABILITY AND EFFECT OF U.S. FEDERAL, STATE, LOCAL AND OTHER APPLICABLE TAX LAWS.

NYSE MKT Stock Market Listing

Mast common stock currently is listed on NYSE MKT under the symbol MSTX . Mast has agreed to use commercially reasonable efforts to maintain its existing listing on NYSE MKT and to obtain approval for listing on NYSE MKT of the shares of Mast common stock that Savara stockholders will be entitled to receive pursuant to the merger. In addition, under the Merger Agreement, each party s obligation to complete the merger is subject to the satisfaction or waiver by each of the parties, at or prior to the merger, of various conditions, including that Mast must have caused the shares of Mast common stock to be issued in the merger to be approved for listing on NYSE MKT.

Prior to consummation of the merger, Mast intends to file an initial listing application for the combined company with the NYSE MKT pursuant to NYSE MKT reverse merger rules. Mast anticipates that its common stock will be listed on the NYSE MKT following the closing of the merger under the trading symbol SVRA.

Anticipated Accounting Treatment

The merger will be treated by Mast as a reverse merger under the acquisition method of accounting in accordance with accounting principles generally accepted in the United States. For accounting purposes, Savara is considered to be acquiring Mast in this transaction. Management of Mast and Savara have made a preliminary estimate of the purchase price calculated as described in Note 1 to the unaudited pro forma condensed combined financial statements. The net tangible and intangible assets acquired and liabilities assumed in connection with the transaction are recorded at their estimated acquisition date fair values. The acquisition method of accounting is dependent upon certain valuations and other studies that have yet to commence or progress to a stage where there is sufficient information for a definitive measurement. A final determination of these estimated fair values, which cannot be made prior to the completion of the transaction, will be based on the actual net tangible and intangible assets of Mast that exist as of the date of completion of the transaction.

Appraisal Rights and Dissenters Rights

Delaware Law

If the merger is completed, Savara stockholders who do not deliver a written consent approving the merger are entitled to appraisal rights under Section 262 of the DGCL, or Section 262, provided that they comply with the conditions established by Section 262. Holders of Mast common stock are not entitled to appraisal rights under Delaware law in connection with the merger.

The discussion below is not a complete summary regarding a Savara stockholder s appraisal rights under Delaware law and is qualified in its entirety by reference to the text of the relevant provisions of Delaware law, which are attached to this proxy statement/prospectus/information statement as *Annex C*. Stockholders intending to exercise appraisal rights

should carefully review *Annex C*. Failure to follow precisely any of the statutory procedures set forth in *Annex C* may result in a termination or waiver of these rights. This summary does not constitute legal or other advice, nor does it constitute a recommendation that Savara stockholders exercise their appraisal rights under Delaware law.

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Under Section 262, where a merger is adopted by stockholders by written consent in lieu of a meeting of stockholders pursuant to Section 228 of the DGCL, either the constituent corporation before the effective date of the merger or the surviving corporation, within 10 days after the effective date of the merger, must notify each stockholder of the constituent corporation entitled to appraisal rights of the approval of the merger, the effective date of the merger and that appraisal rights are available.

If the merger is completed, within 10 days after the effective date of the merger Savara will notify its stockholders that the merger has been approved, the effective date of the merger and that appraisal rights are available to any stockholder who has not approved the merger. Holders of shares of Savara capital stock who desire to exercise their appraisal rights must deliver a written demand for appraisal to Savara within 20 days after the date of mailing of that notice, and that stockholder must not have delivered a written consent approving the merger. A demand for appraisal must reasonably inform Savara of the identity of the stockholder and that such stockholder intends thereby to demand appraisal of the shares of Savara capital stock held by such stockholder. Failure to deliver a written consent approving the merger will not in and of itself constitute a written demand for appraisal satisfying the requirements of Section 262. All demands for appraisal should be addressed to Savara Inc., 900 S. Capital of Texas Highway, Las Cimas IV, Suite 150, Austin, Texas 78746, Attention: Corporate Secretary, and should be executed by, or on behalf of, the record holder of shares of Savara capital stock. ALL DEMANDS MUST BE RECEIVED BY SAVARA WITHIN TWENTY (20) DAYS AFTER THE DATE SAVARA MAILS A NOTICE TO ITS STOCKHOLDERS NOTIFYING THEM THAT THE MERGER HAS BEEN APPROVED, THE EFFECTIVE DATE OF THE MERGER AND THAT APPRAISAL RIGHTS ARE AVAILABLE TO ANY STOCKHOLDER WHO HAS NOT APPROVED THE MERGER.

If you fail to deliver a written demand for appraisal within the time period specified above, you will be entitled to receive the merger consideration for your shares of Savara capital stock as provided for in the Merger Agreement, but you will have no appraisal rights with respect to your shares of Savara capital stock.

To be effective, a demand for appraisal by a holder of shares of Savara capital stock must be made by, or in the name of, the registered stockholder, fully and correctly, as the stockholder s name appears on the stockholder s stock certificate(s). Beneficial owners who do not also hold the shares of record may not directly make appraisal demands to Savara. The beneficial owner must, in these cases, have the registered owner, such as a broker, bank or other custodian, submit the required demand in respect of those shares. If shares are owned of record in a fiduciary capacity, such as by a trustee, guardian or custodian, execution of a demand for appraisal should be made by or for the fiduciary; and if the shares are owned of record by more than one person, as in a joint tenancy or tenancy in common, the demand should be executed by or for all joint owners. An authorized agent, including an authorized agent for two or more joint owners, may execute the demand for appraisal for a stockholder of record; however, the agent must identify the record owner or owners and expressly disclose the fact that, in executing the demand, he or she is acting as agent for the record owner. A record owner, such as a broker, who holds shares as a custodian for others, may exercise the record owner s right of appraisal with respect to the shares held for one or more beneficial owners, while not exercising this right for other beneficial owners. In that case, the written demand should state the number of shares as to which appraisal is sought. Where no number of shares is expressly mentioned, the demand will be presumed to cover all shares held in the name of the record owner. In addition, the stockholder must continuously hold the shares of record from the date of making the demand through the effective time of the merger.

If you hold your shares of Savara capital stock in a brokerage account or in other custodian form and you wish to exercise appraisal rights, you should consult with your bank, broker or other custodian to determine the appropriate procedures for the making of a demand for appraisal by the custodian.

At any time within 60 days after the effective time of the merger, any stockholder who has demanded an appraisal, but has neither commenced an appraisal proceeding or joined an appraisal proceeding as a named party, has the right to withdraw such stockholder s demand and accept the terms of the merger by delivering a

written withdrawal to Savara. If, following a demand for appraisal, you have withdrawn your demand for appraisal in accordance with Section 262, you will have the right to receive the merger consideration for your shares of Savara capital stock.

Within 120 days after the effective date of the merger, any stockholder who has delivered a demand for appraisal in accordance with Section 262 will, upon written request to the surviving corporation, be entitled to receive a written statement setting forth the aggregate number of shares not voted in favor of the Merger Agreement and with respect to which demands for appraisal rights have been received and the aggregate number of holders of these shares. This written statement will be mailed to the requesting stockholder within 10 days after the stockholder s written request is received by the surviving corporation or within ten days after expiration of the period for delivery of demands for appraisal, whichever is later. Within 120 days after the effective date of the merger, either the surviving corporation or any stockholder who has delivered a demand for appraisal in accordance with Section 262 may file a petition in the Delaware Court of Chancery demanding a determination of the fair value of the shares held by all such stockholders. Upon the filing of the petition by a stockholder, service of a copy of the petition must be made upon the surviving corporation. The surviving corporation has no obligation to file a petition in the Delaware Court of Chancery in the event there are dissenting stockholders, and Savara, which is expected to be the surviving corporation, has no present intent to file a petition in the Delaware Court of Chancery. Accordingly, the failure of a stockholder to file a petition within the period specified could nullify the stockholder s previously written demand for appraisal.

If a petition for appraisal is duly filed by a stockholder and a copy of the petition is delivered to the surviving corporation, the surviving corporation will then be obligated, within 20 days after receiving service of a copy of the petition, to provide the Delaware Court of Chancery with a duly verified list containing the names and addresses of all stockholders who have demanded an appraisal of their shares and with whom agreements as to the value of their shares have not been reached by the surviving corporation. After notice to dissenting stockholders who demanded appraisal of their shares, the Delaware Court of Chancery is empowered to conduct a hearing upon the petition, and to determine those stockholders who have complied with Section 262 and who have become entitled to the appraisal rights provided thereby. The Delaware Court of Chancery may require the stockholders who have demanded appraisal for their shares to submit their stock certificates to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any stockholder fails to comply with that direction, the Delaware Court of Chancery may dismiss the proceedings as to that stockholder.

After determination of the stockholders entitled to appraisal of their shares, the Delaware Court of Chancery will appraise the fair value of the shares owned by those stockholders. This value will be exclusive of any element of value arising from the accomplishment or expectation of the merger, but may include a fair rate of interest, if any, upon the amount determined to be the fair value. When the value is determined, the Delaware Court of Chancery will direct the payment of the value, with interest thereon accrued during the pendency of the proceeding, if the Delaware Court of Chancery so determines, to the stockholders entitled to receive the same, upon surrender by the holders of the certificates representing those shares.

In determining fair value, and, if applicable, a fair rate of interest, the Delaware Court of Chancery is required to take into account all relevant factors. In *Weinberger v. UOP, Inc.*, the Delaware Supreme Court discussed the factors that could be considered in determining fair value in an appraisal proceeding, stating that proof of value by any techniques or methods which are generally considered acceptable in the financial community and otherwise admissible in court should be considered, and that fair price obviously requires consideration of all relevant factors involving the value of a company.

Section 262 provides that fair value is to be exclusive of any element of value arising from the accomplishment or expectation of the merger. In *Cede & Co. v. Technicolor, Inc.*, the Delaware Supreme Court stated that this exclusion

is a narrow exclusion [that] does not encompass known elements of value, but which rather applies only to the speculative elements of value arising from such accomplishment or expectation. In

Weinberger, the Delaware Supreme Court construed Section 262 to mean that elements of future value, including the nature of the enterprise, which are known or susceptible of proof as of the date of the merger and not the product of speculation, may be considered.

You should be aware that the fair value of your shares as determined under Section 262 could be more than, the same as, or less than the value that you are entitled to receive under the terms of the Merger Agreement.

Costs of the appraisal proceeding may be imposed upon the surviving corporation and the stockholders participating in the appraisal proceeding by the Delaware Court of Chancery as the Court deems equitable in the circumstances. Upon the application of a stockholder, the Delaware Court of Chancery may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorneys fees and the fees and expenses of experts, to be charged pro rata against the value of all shares entitled to appraisal. In the absence of such a determination of assessment, each party bears its own expenses. Any stockholder who had demanded appraisal rights will not, after the effective time of the merger, be entitled to vote shares subject to that demand for any purpose or to receive payments of dividends or any other distribution with respect to those shares, other than with respect to payment as of a record date prior to the effective time; however, if no petition for appraisal is filed within 120 days after the effective time of the merger, or if the stockholder delivers a written withdrawal of his or her demand for appraisal and an acceptance of the terms of the merger within 60 days after the effective time of the merger, then the right of that stockholder to appraisal will cease and that stockholder will be entitled to receive the merger consideration for shares of his or her Savara capital stock pursuant to the Merger Agreement. Any withdrawal of a demand for appraisal made more than 60 days after the effective time of the merger may only be made with the written approval of the surviving corporation. No appraisal proceeding in the Delaware Court of Chancery will be dismissed as to any stockholder without the approval of the court.

Failure to follow the steps required by Section 262 for perfecting appraisal rights may result in the loss of appraisal rights. In view of the complexity of Section 262, stockholders who may wish to dissent from the merger and pursue appraisal rights should consult their legal advisors.

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THE MERGER AGREEMENT

The following is a summary of the material terms of the Merger Agreement. A copy of the Merger Agreement is attached as Annex A to this proxy statement/prospectus/information statement and is incorporated by reference into this proxy statement/prospectus/information statement. The Merger Agreement has been attached to this proxy statement/prospectus/information statement to provide you with information regarding its terms. It is not intended to provide any other factual information about Mast, Savara or Merger Sub. The following description does not purport to be complete and is qualified in its entirety by reference to the Merger Agreement. You should refer to the full text of the Merger Agreement for details of the merger and the terms and conditions of the Merger Agreement.

The Merger Agreement contains representations and warranties that Mast and Merger Sub, on the one hand, and Savara, on the other hand, have made to one another as of specific dates. These representations and warranties have been made for the benefit of the other parties to the Merger Agreement and may be intended not as statements of fact but rather as a way of allocating the risk to one of the parties if those statements prove to be incorrect. In addition, the assertions embodied in the representations and warranties are qualified by information in confidential disclosure schedules exchanged by the parties in connection with signing the Merger Agreement. While Mast and Savara do not believe that these disclosure schedules contain information required to be publicly disclosed under the applicable securities laws, other than information that has already been so disclosed, the disclosure schedules do contain information that modifies, qualifies and creates exceptions to the representations and warranties set forth in the attached Merger Agreement. Accordingly, you should not rely on the representations and warranties as current characterizations of factual information about Mast or Savara, because they were made as of specific dates, may be intended merely as a risk allocation mechanism between Mast and Merger Sub, and Savara and are modified by the disclosure schedules.

General

Under the Merger Agreement, Victoria Merger Corp., or Merger Sub, a wholly owned subsidiary of Mast formed by Mast in connection with the merger, will merge with and into Savara, with Savara surviving as a wholly owned subsidiary of Mast.

Merger Consideration

Immediately prior to the effective time of the merger, each share of Savara preferred stock outstanding at such time will be converted into shares of Savara common stock at a ratio determined in accordance with the Savara certificate of incorporation then in effect. At the effective time of the merger,

- each share of Savara capital stock issued and outstanding immediately prior to the effective time of the merger (excluding shares of Savara capital stock (i) held in the treasury of Savara, (ii) held by Mast or any direct or indirect wholly owned subsidiary of Savara or Mast immediately prior to the effective time of the merger or (iii) for which such holder has properly demanded appraisal) will be converted into and represent the right to receive a number of shares of validly issued, fully paid and non-assessable shares of Mast common stock equal to the exchange ratio, described below;

- each Savara Option will be assumed by Mast and will become an option, subject to vesting, to purchase that number of shares of the common stock of Mast multiplied by the exchange ratio (and rounding the resulting

number down to the nearest whole share), at an exercise price equal to the per share exercise price of such Savara Option divided by the exchange ratio (and rounding the resulting number up to the nearest whole cent);

each award of Savara Restricted Shares will be assumed by Mast and will become an award of a number of restricted shares of Mast, subject to vesting, determined by multiplying the number of Savara Restricted Shares subject to the award by the exchange ratio (and rounding the resulting number down to the nearest whole share); and

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each Savara Warrant will be assumed by Mast and will become a warrant to purchase that number of shares of the common stock of Mast multiplied by the exchange ratio (and rounding the resulting number down to the nearest whole share), at an exercise price equal to the per share exercise price of such Savara Warrant divided by the exchange ratio (and rounding the resulting number up to the nearest whole cent).

No fractional shares of Mast common stock will be issuable pursuant to the merger to Savara stockholders. Instead, each Savara stockholder who would otherwise be entitled to receive a fraction of a share of Mast common stock, after aggregating all fractional shares of Mast common stock issuable to such stockholder, will be entitled to receive in cash the dollar amount, rounded down to the nearest whole cent, without interest, determined by multiplying such fraction by the average of the closing prices of a share of Mast common stock as quoted on NYSE MKT for the ten (10) consecutive trading days ending with the second to last trading day immediately preceding the effective time of the merger.

Exchange Ratio

The exchange ratio is calculated using a formula intended to allocate to the existing Savara securityholders (on a fully diluted basis) a percentage of the combined company based on the relative valuations of $115 million for Savara and $36.5 million for Mast.

The exchange ratio formula is the quotient obtained by dividing the Savara merger shares (as defined below) by the Savara fully-diluted outstanding shares, where:

Savara merger shares is the product determined by multiplying the post-closing Mast shares (as defined below) by the Savara allocation percentage (as defined below).

Savara fully-diluted outstanding shares is the total number of shares of Savara capital stock outstanding immediately prior to the effective time of the merger on an as-converted to common stock basis, assuming (i) the exercise of all Savara options and Savara warrants to purchase shares of Savara capital stock outstanding as of immediately prior to the effective time of the merger, (ii) the conversion of all shares of Savara preferred stock into shares of Savara common stock at the applicable conversation ratio as of the date of the consummation of the merger, (iii) the conversion of all shares of Savara restricted shares into restricted shares of Savara common stock, (iv) the conversion or exercise of all other securities convertible into or exercisable for shares of Savara capital stock, including all outstanding convertible promissory notes or other debt instruments convertible into Savara common stock, and (v) the issuance of any shares of Savara capital stock under any contract or arrangement pursuant to which Savara is obligated to issue such shares; provided, however, that all shares of Savara capital stock issued in connection with a permitted bridge financing will be excluded from such amount.

Post-closing Mast shares is the quotient determined by dividing the Mast fully-diluted outstanding shares by the Mast allocation percentage (as defined below).

Mast fully-diluted outstanding shares is the total number of shares of Mast common stock outstanding immediately prior to the effective time of the merger on an as-converted to common stock basis, including any such shares issued in a dilutive atm issuance (as defined in the section entitled The Merger

Agreement Financing), and after taking into account the effects of the reverse stock split assuming, (i) the exercise of Mast warrants issued and outstanding as of the date of the merger agreement to purchase an aggregate amount of 15,273,818 shares of Mast common stock, subject to a proportionate reduction in any amount included in such 15,273,818 shares as may be purchased by Mast at the Determination Date (as defined below), (ii) the exercise of Mast options to purchase shares of Mast capital stock that will remain outstanding as of immediately following the effective time of the merger and that may continue to be exercisable on or after January 1, 2018, (iii) the exercise of all Mast options or Mast warrants or other securities convertible into or exercisable for shares of Mast

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capital stock issued after the date of the merger agreement and outstanding as of immediately prior to the effective time of the merger, (iv) the conversion or exercise of all other securities convertible into or exercisable for shares of Mast capital stock and (v) the issuance of any shares of Mast capital stock under any contract or arrangement pursuant to which Mast is obligated to issue such shares; provided, however, all shares of Mast capital stock issued in connection with a non-dilutive atm issuance (as defined below) or pursuant to terms of the agreement and plan of merger between Mast, SynthRx, Inc. and the other parties thereto, dated February 12, 2011, will be excluded from such amount.

Savara allocation percentage is sum of 100% minus the Mast allocation percentage.

Aggregate value is $151,500,000.

Mast allocation percentage is the quotient determined by dividing (i) the difference of $36,500,000 minus any net cash adjustment amount (as defined below), if any by (ii) the aggregate value.

The exchange ratio is subject to (i) upward adjustment to the extent that Mast s net cash at the effective time of the merger is less than zero dollars ($0.00) (and as a result, Mast securityholders could own less, and Savara securityholders could own more, of the combined company) and (ii) adjustment to reflect the proposed [ ] reverse stock split. No adjustment will be made to the exchange ratio in respect of any post-closing financing (as defined in the section entitled The Merger Agreement Financing).

The Merger Agreement does not include a price-based termination right, so there will be no adjustment to the total number of shares of Mast common stock that Savara stockholders, optionholders and warrantholders will be entitled to receive for changes in the market price of Mast common stock. Accordingly, the market value of the shares of Mast common stock issued pursuant to the merger will depend on the market value of the shares of Mast common stock at the time of the merger, and could vary significantly from the market value on the date of this proxy statement/prospectus/information statement.

Determination of Net Cash

Unless otherwise agreed to by the parties, Mast s estimated net cash as of the anticipated closing will be calculated at least ten (10) calendar days before the closing date of the merger (the Determination Date). Following the final determination of Mast s net cash as of the closing, Mast and Savara will issue a press release setting forth, among other things, the exchange ratio as of the anticipated date of the closing of the merger. Mast and Savara agree to work together in good faith to agree upon the estimated net cash as of the closing, provided, however, that in the event they are unable to reach an agreement as of the Determination Date, the closing of the merger could be delayed.

Under the merger agreement, Mast s net cash is defined as Mast s and Mast s subsidiaries (i) unrestricted cash, cash equivalents and short term marketable securities, *minus* (ii) Mast s debt, excluding all but $1,771,000 of the amount of outstanding indebtedness that Mast owes to Hercules Technology III and L.P., Hercules Capital, Inc. (Hercules), *minus* (iii) any bonus, severance, change-in-control payments or similar payment obligations that become due or payable, or are planned with respect to, to any director, officer, employee or consultant of Mast or its subsidiaries in connection with the merger relating to terminations of service prior to the effective time of the merger (unless paid prior to such time), *minus* (iv) all payroll, employment or other withholding taxes incurred by Mast and its affiliates in connection with the merger or otherwise, *minus* (v) all accrued taxes and other liabilities and accounts payable determined in a manner consistent with the manner in which such items have been historically determined and

reflected in Mast s financial statements (without duplication of any items otherwise accounted for in the definition of Net Cash), *minus* (vi) if Mast has not secured a subtenant for its office space providing for payment by such subtenant at subtenant market rental rates prior to the effective time of the merger, $250,000, *minus* (vii) Mast s transaction costs in connection with the merger (unless paid prior to the effective time of the merger or otherwise accounted for in the definition of net cash), *minus* (viii) fees and expenses payable by Mast in the event the Mast and Savara have engaged an accounting firm to resolve a

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disagreement as to the net cash calculation *minus* (ix) the cash cost of repurchasing any shares, or any rights with respect to shares, of Mast capital stock, solely to the extent that Mast is obligated to purchase such shares or rights and the purchase price for such shares or rights has not been fully paid by Mast as of the Determination Date. Notwithstanding the foregoing, any of the items set forth in the preceding clauses (ii), (iii) and (v) will not be included in the calculation of net cash to the extent neither Mast nor any of its subsidiaries is or may become obligated to make payments in respect thereof prior to the one-year anniversary of the closing of the merger.

Mast s net cash balance at the Determination Date is subject to numerous factors, many of which are outside of Mast s control. Furthermore, the exchange ratio at the effective time of the merger will be subject to (i) upward adjustment to the extent that Mast s net cash is less than zero dollars ($0.00) (and as a result, Mast securityholders could own less, and Savara securityholders could own more, of the combined company) and (ii) adjustment to reflect the proposed [ ] reverse stock split, as described under The Merger Agreement Exchange Ratio. No adjustment will be made to the exchange ratio in respect of any post-closing financing or in the event that Mast s net cash exceeds zero dollars ($0.00).

Procedures for Exchanging Savara Stock Certificates

The Merger Agreement provides that, as soon as practicable after the effective time of the merger, Mast will issue and deposit with the Exchange Agent non-certificated shares of Mast common stock represented by book-entry issuable to the Savara stockholders and a sufficient amount of cash to make payments in lieu of fractional shares.

The Merger Agreement provides that, as soon as reasonably practicable after the effective time of the merger, the Exchange Agent will mail to each record holder of Savara capital stock a letter of transmittal and instructions for surrendering and exchanging the record holder s Savara stock certificates for shares of Mast common stock. Upon surrender of a Savara stock certificate for exchange to the Exchange Agent, together with a duly signed letter of transmittal and such other documents as the Exchange Agent or Mast may reasonably require, the Savara stock certificate surrendered will be cancelled and the holder of the Savara stock certificate will be entitled to receive the following:

- non-certificated shares of Mast common stock represented by book-entry that such holder has the right to receive pursuant to the provisions of the Merger Agreement; and
- cash in lieu of any fractional share of Mast common stock.

At the effective time of the merger, all shares of Savara capital stock outstanding immediately prior to the effective time of the merger will be cancelled and all holders of Savara capital stock that was outstanding immediately prior to the effective time of the merger will cease to have any rights as stockholders of Savara. In addition, the stock transfer books of Savara will be closed with respect to all shares of Savara capital stock outstanding immediately prior to the effective time of the merger and no transfer of any shares of Savara capital stock will be made after the effective time of the merger on such stock transfer books.

If any Savara stock certificate has been lost, stolen or destroyed, the Exchange Agent will, as a condition to the delivery of any shares of Mast common stock, require the owner of such lost, stolen or destroyed certificate to provide an appropriate affidavit and deliver a bond as indemnity against any claim that may be made against the Exchange Agent, Mast or the surviving corporation with respect to a lost, stolen or destroyed certificate.

From and after the effective time of the merger, until it is surrendered, each certificate that previously evidenced Savara capital stock will be deemed to represent only the right to receive shares of Mast common stock and cash in lieu of any fractional share of Mast common stock. No dividends or distributions declared or made with respect to Mast common stock with a record date after the effective time of the merger will be paid to the holder of any unsurrendered certificate representing shares of Savara capital stock with respect to the shares of Mast common stock that such holder has the right to receive in the merger until such holder surrenders such certificate for exchange to the Exchange Agent.

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Treatment of Savara Options and Savara Restricted Shares

At the effective time of the merger, each Savara Option, whether vested or not vested, will be converted into a Mast Option and each Mast Option may be exercised solely for shares of Mast common stock. Mast will assume the Savara Stock Option Plan. The number of shares of Mast common stock subject to each Mast Option will be determined by multiplying (i) the number of shares of Savara common stock that were subject to the underlying Savara Option by (ii) the exchange ratio, with the resulting number rounded down to the nearest whole number of shares of Mast common stock. The per share exercise price for the Mast common stock subject to such Mast Option will be determined by dividing (i) the per share exercise price of the underlying Savara Option by (ii) the exchange ratio, with the resulting number rounded up to the nearest whole cent.

Any restrictions on the exercise of assumed Savara Options will continue in full force and effect following the conversion and the term, exercisability, vesting schedules, status as an incentive stock option under Section 422 of the Code, if applicable, and other provisions of the assumed Savara Options will generally remain unchanged; provided, that any Savara Options assumed by Mast may be subject to adjustment to reflect changes in Mast s capitalization after the effective time of the merger and that the Mast Board or any committee thereof will succeed to the authority of the Savara Board with respect to each assumed Savara Option.

At the effective time, Savara Restricted Share will be exchanged for a Mast Restricted Share and each Mast Restricted Share will have, and be subject to, the same terms and conditions (including vesting terms) set forth in Savara s Stock Option Plan and applicable Savara Restricted Share agreements relating thereto, as in effect immediately prior to the effective time of the merger. The number of Mast Restricted Shares that will be exchanged for an award of Savara Restricted Shares will equal the number of Savara Restricted Shares outstanding subject to such award immediately prior to the effective time of the merger multiplied by the exchange ratio, with the result rounded down to the nearest whole number of shares of Mast common stock.

Treatment of Savara Warrants

At the effective time of the merger, each Savara Warrant will be converted into a Mast Warrant and each Mast Warrant may be exercised solely for shares of Mast common stock. The number of shares of Mast common stock subject to each Mast Warrant will be determined by multiplying (i) the number of shares of Savara common stock that were subject to the underlying Savara Warrant by (ii) the exchange ratio, with the resulting number rounded down to the nearest whole number of shares of Mast common stock. The per share exercise price for the Mast common stock subject to such Mast Warrant will be determined by dividing (i) the per share exercise price of the underlying Savara Warrant by (ii) the exchange ratio, with the resulting number rounded up to the nearest whole cent.

Any restrictions on the exercise of assumed Savara Warrants will continue in full force and effect following the conversion and the term, exercisability, and other provisions of the assumed Savara Warrants will otherwise remain unchanged; provided, that any Savara Warrants assumed by Mast may be subject to adjustment to reflect changes in Mast s capitalization after the effective time of the merger.

Directors and Executive Officers of Mast Following the Merger

Pursuant to the Merger Agreement, the Mast Board immediately after the effective time of the merger will consist of five members designated by Savara (the Savara appointees) and two independent directors designated by Mast, subject to the consent of Savara (with such consent not to be unreasonably withheld by Savara). Each current director of Mast that will no longer be a member of the Mast Board after the effective time of the merger will resign effective as of the effective time of the merger. From and after the effective time of the merger, the Mast Board will maintain an

independent audit committee, and it is anticipated that the company appointees, together with the independent directors designated by Mast, will allow the Mast Board to comply with the requisite independence requirements and all applicable securities laws. Each new director of Mast that was not a member of the Mast Board immediately before the effective time of the merger will enter into an

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indemnification agreement with Mast within fifteen (15) days of their respective appointment. It is anticipated that the Mast Board will include the following Savara appointees, Robert Neville, Nevan Elam, Richard J. Hawkins, Yuri Pikover and Joseph S. McCracken as well as [ ] and [ ], both of whom were appointed by Mast. Effective as of the effective time of the merger, Savara will direct the Mast Board to appoint each of the following as officers of Mast:

Name	Title
Robert Neville	Chief Executive Officer and President
Taneli Jouhikainen	Chief Operating Officer
David Lowrance	Chief Financial Officer

Amendments to the Amended and Restated Certificate of Incorporation of Mast

Stockholders of record of Mast common stock on the record date for the Mast special meeting will also be asked to approve the amendment to the amended and restated certificate of incorporation of Mast to (i) effect the proposed [ ] reverse stock split and (ii) change the name of the corporation from Mast Therapeutics, Inc. to Savara Inc. in connection with the merger, each of which requires the affirmative vote of holders of a majority of the outstanding common stock on the record date for the Mast special meeting.

Conditions to the Completion of the Merger

Each party s obligation to effect the merger is subject to the satisfaction or waiver by each of the parties, at or prior to the effective time of the merger, of various conditions, which include the following:

- the registration statement on Form S-4, of which this proxy statement/prospectus/information statement is a part, must have been declared effective by the SEC in accordance with the Securities Act and must not be subject to any stop order or proceedings seeking a stop order;

- there must not have been any temporary restraining order, preliminary or permanent injunction or other order issued by any court of competent jurisdiction or other legal restraint or prohibition preventing the consummation of the merger that is in effect, and there must not be any proceeding brought by any administrative agency or commission or other governmental body or instrumentality, domestic or foreign, seeking any temporary restraining order, preliminary or permanent injunction or other order preventing the consummation of the merger that is pending, and there must not have been any action taken, or any statute, rule, regulation, or order enacted, entered, enforced or deemed applicable to the merger, which makes the consummation of the merger illegal;

- the holders of a majority in voting power of the outstanding shares Savara preferred stock on the applicable record date, voting together as one class, and the holders of a majority in voting power of the outstanding shares of all Savara capital stock must have adopted the Merger Agreement and approved the merger, and the holders of a majority of the outstanding shares of Mast common stock must have approved the merger, the issuance of Mast common stock in the merger and the amended and restated certificate of incorporation of Mast, including for purposes of effectuating the [ ] reverse stock split;

the shares of Mast common stock to be issued in the merger must have been approved for listing on NYSE MKT (subject to official notice of issuance); and

any waiting period applicable to the consummation of the merger under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, or HSR Act, must have expired or been terminated.

In addition, the obligation of Mast to effect the merger is also subject to the satisfaction or waiver of certain conditions, including the following:

the (i) representations and warranties of Savara in the Merger Agreement with respect to its capital structure and authorization must be true and correct in all material respects and as of the closing date of

the merger, with the same force and effect as if made on and as of the closing date of the merger, except for those representations and warranties which address matters only as of a particular date (which must be true and correct in all material respects as of such date) and (ii) representations and warranties of Savara in the Merger Agreement, other than those with respect to its capital structure and authorization, must be true and correct in all respects on and as of the closing date of the merger, with the same force and effect as if made on and as of the closing date of the merger, expect for those representations and warranties which address matters only as of a particular date (which must be true and correct in all material respects as of such date), or contain inaccuracies that, individually or in the aggregate, do not constitute and would not reasonably be expected to constitute a material adverse effect, provided that for purposes of clause (ii), all material adverse effect qualifications and other materiality qualifications limiting the scope of the representations and warranties of Savara in the Merger Agreement will be disregarded. The merger and the transactions contemplated in connection with the merger does not constitute a breach of Savara s representations and warranties with respect to its capital structure;

Savara must have performed or complied with in all material respects its agreements and covenants required by the Merger Agreement to be performed or complied with by it on or prior to the effective time of the merger;

since the date of the Merger Agreement, there must not have been any change, occurrence or circumstance in the business, results of operations or financial condition of Savara or any subsidiary of Savara that (i) prevents Savara from consummating the merger or (ii) had, individually or in the aggregate, a material adverse effect on the business, financial condition, operations or result of operations of Savara or its subsidiaries taken as a whole that is continuing, provided, however, that in no event will any of the following, alone or in combination, be deemed to constitute, nor will any of the following be taken into account in determining whether there has occurred a material adverse effect on Savara:

- conditions generally affecting the industries in which Savara or its subsidiaries participate, or the United States or global economy or capital markets as a whole (only to the extent that, individually or in the aggregate, such effects do not have a disproportionate impact on Savara and its subsidiaries taken as a whole);

- any failure by the Savara or any of its subsidiaries to meet internal projections or forecasts or third party revenue or earnings predictions for any period ending (or for which revenues or earnings are released) on or after the date of the Merger Agreement (however, any effect causing or contributing to such failures to meet projections or predictions may, if not otherwise to be disregarded pursuant to the terms of the Merger Agreement, constitute a material adverse effect and may be taken into account in determining whether a material adverse effect has occurred);

- any natural disaster or any acts of terrorism, sabotage, military action or war or any escalation or worsening thereof (only to the extent that, individually or in the aggregate, such effects do not have a disproportionate impact on Savara and its subsidiaries taken as a whole); or

any changes (after the date of the Merger Agreement) in GAAP or applicable laws (only to the extent that, individually or in the aggregate, such effects do not have a disproportionate impact on Savara and its subsidiaries taken as a whole).

Mast must have received written resignations from each resigning member of the board of directors of Savara and each of its subsidiaries;

holders of no more than five percent (5%) of the shares of Savara capital stock on an as-converted to common stock basis have demanded and not lost or withdrawn appraisal rights; and

Savara must have effected a conversion of its preferred stock into common stock immediately prior to the effective time of the merger.

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In addition, the obligation of Savara to complete the merger is further subject to the satisfaction or waiver of certain conditions, including the following:

the (i) representations and warranties of Mast and Merger Sub in the Merger Agreement with respect to their capital structure and authorization must be true and correct in all material respects on and as of the closing date of the merger, with the same force and effect as if made on and as of the closing date of the merger, except for those representations and warranties which address matters only as of a particular date (which must be true and correct in all material respects as of such date) and (ii) representations and warranties of Mast and Merger Sub in the Merger Agreement, other than those with respect to their capital structure and authorization, must be true and correct in all respects on and as of the closing date of the merger, with the same force and effect as if made on and as of the closing date of the merger, expect for those representations and warranties which address matters only as of a particular date (which must be true and correct in all material respects as of such date), or contain inaccuracies that, individually or in the aggregate, do not constitute and would not reasonably be expected to constitute a material adverse effect, provided that for purposes of clause (ii), all material adverse effect qualifications and other materiality qualifications limiting the scope of the representations and warranties of Mast and Merger Sub in the Merger Agreement will be disregarded;

Mast and Merger Sub must have performed or complied with in all material respects its agreements and covenants required by the Merger Agreement to be performed or complied with by it on or prior to the effective time of the merger;

since the date of the Merger Agreement, there must not have been any change, occurrence or circumstance in the business, results of operations or financial condition of Mast or any subsidiary of Mast that (i) prevents Mast or Merger Sub from consummating the merger or (ii) had, individually or in the aggregate, a material adverse effect on the business, financial condition, operations or result of operations of Mast or its subsidiaries taken as a whole, that is continuing, provided, however, that in no event will any of the following, alone or in combination, be deemed to constitute, nor will any of the following be taken into account in determining whether there has occurred a material adverse effect on Mast:

conditions generally affecting the industries in which Masts participates, or the United States or global economy or capital markets as a whole (only to the extent that, individually or in the aggregate, such effects do not have a disproportionate impact on Savara and its subsidiaries taken as a whole);

changes in the trading price or trading volume of Mast common stock (however, any effect causing or contributing to such changes in the trading price or trading volume of mast common stock may if not otherwise to be disregarded pursuant to the Merger Agreement, constitute a material adverse effect and may be taken into account in determining whether a material adverse effect has occurred);

any failure by the Mast or any of its subsidiaries to meet internal projections or forecasts or third party revenue or earnings predictions for any period ending (or for which revenues or earnings are released)

on or after the date of the Merger Agreement (however, any effect causing or contributing to such failures to meet projections or predictions may, if not otherwise to be disregarded pursuant to the terms of the Merger Agreement, constitute a material adverse effect and may be taken into account in determining whether a material adverse effect has occurred);

any natural disaster or any acts of terrorism, sabotage, military action or war or any escalation or worsening thereof (only to the extent that, individually or in the aggregate, such effects do not have a disproportionate impact on Mast and its subsidiaries taken as a whole); or

any changes (after the date of the Merger Agreement) in GAAP or applicable laws (only to the extent that, individually or in the aggregate, such effects do not have a disproportionate impact on Mast and its subsidiaries taken as a whole).

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Savara must have received written resignations from each resigning member of the Mast Board and each of its subsidiaries, with such resignation to be effective as of the effective time of the merger;

each of the Savara appointees has been elected to the Mast Board;

the reverse stock split must have become effective; and

unless otherwise agreed to between Mast and Savara, Mast must have amended that certain Loan and Security Agreement, dated August 11, 2015, amended by the First Amendment thereto dated September 28, 2015, the Second Amendment thereto dated December 31, 2015, the Third Amendment thereto dated February 25, 2016, and the Fourth Amendment thereto dated July 22, 2016, by and between Hercules Technology III and L.P., Hercules Capital, Inc. and Mast (the Hercules Agreement) in accordance with the terms mutually agreed to by Mast and Savara.

Representations and Warranties

The Merger Agreement contains customary representations and warranties of Mast and Savara for a transaction of this type relating to, among other things:

corporate organization and power, and similar corporate matters;

capital structure;

financial statements, undisclosed liabilities and with respect to Mast, documents filed with the SEC and the accuracy of information contained in those documents;

absence of material changes or events;

title to assets;

real property and leaseholds;

intellectual property;

the validity of material contracts to which the parties or their subsidiaries are a party and any violation, default or breach to such contracts;

liabilities;

regulatory compliance, permits and restrictions;

tax matters;

inapplicability of anti-takeover statutes;

employee benefit plans;

insurance;

compliance with legal requirements;

legal proceedings and orders;

authority to enter into the Merger Agreement and the transactions contemplated by the Merger Agreement;

transactions with affiliates;

votes required for adoption of the Merger Agreement, approval of the merger and approval of the proposals that will come before the Mast special meeting;

except as otherwise specifically identified in the Merger Agreement, the fact that the consummation of the merger would not contravene organizational documents, applicable laws or require the consent of any third party;

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any brokerage or finder s fee or other fee or commission in connection with the merger;

with respect to Savara, labor matters;

with respect to Savara, environmental matters;

with respect to Savara, its ability to bid on government contracts;

with respect to Savara, the availability and accuracy of its books and records;

with respect to Mast, that it is not a shell company;

with respect to Mast, the opinion of its financial advisor, ROTH Capital Partners, LLC that the exchange ratio is fair to Mast from a financial point of view;

with respect to Mast, the truth, accuracy and completeness of its representations or warranties in the Merger Agreement and the information contained in its disclosure schedule to the Merger Agreement;

with respect to Mast, the valid issuance in the merger of the Mast common stock; and

the truth, accuracy and completeness of the information supplied by the parties in this Proxy Statement/Prospectus/Information Statement.

The representations and warranties are, in many respects, qualified by materiality and knowledge, and will not survive the merger, but their accuracy forms the basis of one of the conditions to the obligations of Mast and Savara to complete the merger.

No Solicitation

Each of Mast and Savara agreed that, except as described below, Mast and Savara will not, and will not authorize or permit any of their respective subsidiaries or any of their respective controlled affiliates, officers, directors, employees, partners, attorneys, accountants, advisors, agents or representatives of such parties or of any such party s subsidiaries or other controlled affiliates to, directly or indirectly:

solicit, initiate, knowingly encourage, induce or facilitate the making, submission or announcement of any acquisition proposal, as defined below, or take any action that would reasonably be expected to lead to an acquisition proposal;

furnish any nonpublic information regarding it to any Person in connection with or in response to an acquisition proposal or an inquiry or indication of interest that could lead to an acquisition proposal;

engage in discussions or negotiations with any person with respect to any acquisition proposal;

approve, endorse or recommend an acquisition proposal; or

enter into any letter of intent or similar document or any agreement contemplating or otherwise relating to an acquisition transaction.

An acquisition proposal means any offer, proposal or indication of interest contemplating or which would reasonably be interpreted to be lead to the contemplation of an acquisition transaction, as defined below.

An acquisition transaction means the following:

any merger, consolidation, amalgamation, share exchange, business combination, issuance of securities, acquisition of securities, tender offer, exchange offer or other similar transaction (i) in which Savara (or its subsidiaries) or Mast (or its subsidiaries) is a constituent corporation, (ii) in which a person or group (as defined in the Securities Exchange Act of 1934, as amended, and the rules promulgated thereunder) of persons directly or indirectly acquires beneficial or record ownership of securities representing more than 15% of the outstanding securities of any class of voting securities of

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Savara (or its subsidiaries) or Mast (or its subsidiaries), or (iii) in which Savara (or its subsidiaries) or Mast (or its subsidiaries) issues securities representing more than 15% of the outstanding securities of any class of voting securities of any such entity (other than as contemplated under the Merger Agreement);

any sale, lease, exchange, transfer, license, acquisition or disposition of any business or businesses or assets that constitute or account for 15% or more of the consolidated net revenues, net income or assets of Savara (or its subsidiaries) or Mast (or its subsidiaries; or

any liquidation or dissolution of any of Savara (or its subsidiaries) or Mast (or its subsidiaries).

However, before obtaining the applicable Mast or Savara stockholder approvals required to adopt the Merger Agreement, each party may furnish nonpublic information regarding such party and its respective subsidiaries to, may enter into discussions with, or facilitate or cooperate with the submission of an acquisition proposal made by any person in response to any such acquisition proposal, that after consultation with a financial advisor and outside legal counsel, such party s board of directors determines in good faith is, or would reasonably be expected to result in a superior offer, as defined below, (and is not withdrawn) if:

such acquisition proposal did not result from a breach of the no solicitation provisions of the Merger Agreement described above;

such party s board of directors concludes in good faith, after having taken into account the advice of its outside legal counsel, that such action is required in order for the board of directors to comply with its fiduciary duty obligations to its stockholders under applicable legal requirements;

at least two business days prior to furnishing any information or entering into discussions with a third party, such party must (i) give the other party written notice of the identity of the third party, the terms and conditions of any proposals or offers (including, if applicable, copies of any written requests, proposals or offers, including proposed agreements) made thereby and of that party s intention to furnish information to, or enter into discussions with such third party and (ii) such party must receive from the third party an executed confidentiality agreement on terms no less favorable to such party than those in the confidentiality agreement between Mast and Savara, with such new confidentiality agreement to contain customary limitations on the use and disclosure of all nonpublic written and oral information furnished to such third party on or behalf of such party (as well as customary standstill provisions if Mast is the party entering into a new confidentiality agreement with the third party); and

substantially contemporaneous with furnishing of any information to a third party, such party furnishes the same information to the other party to the extent not previously furnished. Notwithstanding the non-solicitation provisions of the Merger Agreement described above, Savara is permitted to take, or refrain from taking, any action described above to the extent any such action is taken in connection with or view a view towards consummating a post-closing financing or refinancing, and no such action or omission will be deemed a violation of the non-solicitation provisions of the Merger Agreement.

A superior offer means an unsolicited, bona fide written acquisition proposal (with all references to 15% in the definition of acquisition proposal being treated as references to 50% for these purposes) made by a third party that (a) was not obtained or made as a direct or indirect result of a breach of (or in violation of) the Merger Agreement and (b) the terms of which the board of directors of either Mast or Savara, as applicable, determines, in its reasonable judgment after consulting in good faith with an independent financial advisor and its outside legal counsel, to be more favorable to its stockholders from a financial point of view than the terms of the merger, as well as the likelihood of the consummation thereof, which consideration shall include whether any financing is or may be required to consummate the transaction contemplated by such proposal, and whether such financing is committed and is reasonably capable of being obtained by the applicable offeror.

The Merger Agreement also provides that each party will promptly (and in no event later than 24 hours after receipt of any acquisition proposal, any inquiry or indication of interest that could lead to an acquisition proposal

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or any request for nonpublic information) advise the other orally and in writing of any acquisition proposal, any inquiry or indication of interest that could lead to an acquisition proposal or any request for nonpublic information relating to such party or its subsidiaries (including the identity of the third party making or submitting such acquisition proposal, inquiry, indication of interest or request, the material terms thereof and copies of any written material submitted therewith) that is made or submitted by any third party between the date of the Merger Agreement and the consummation of the merger. Each party will keep the other informed on a prompt basis in all material respects with respect to the status of any such acquisition proposal, inquiry, indication of interest or request and any modification or proposed modification thereto and shall deliver copies of any written material submitted therewith.

The Merger Agreement provides that each party must have immediately ceased and caused to be terminated any discussions that existed at the date the Merger Agreement was signed with any third party that related to any acquisition proposal and such party must have promptly requested from each third party that executed a confidentiality agreement in connection with its consideration of making an acquisition proposal prior to the date of the Merger Agreement to return or destroy all confidential information concerning Savara or Mast, as applicable, or any of their subsidiaries, as applicable, and promptly terminated all physical and electronic data access previously granted to such third party.

Meetings of Stockholders

Mast is obligated under the Merger Agreement to take all action necessary under applicable legal requirements to call, give notice of and hold a special meeting of its stockholders to vote on the merger, the issuance of Mast common stock in the merger, the proposed amendment and restatement of the amended and restated certificate of incorporation of Mast, including for purposes of effectuating the [ ] reverse stock split. The Mast special meeting will be held as promptly as practicable, but in any event, within forty-five days after the effective date of the registration statement on Form S-4.

If on a date preceding the date on which or the date on which the Mast special meeting is scheduled, Mast reasonably believes that (i) it will not receive proxies sufficient to obtain the requisite stockholder approval, whether or not a quorum would be present or (ii) it will not have sufficient shares of Mast common stock represented (either in person or by proxy) to constitute a quorum necessary to conduct the business of the Mast special meeting, Mast may (or will, at the Savara s direction) postpone or adjourn, or make one or more successive postponements or adjournments of, the Mast special meeting as long as the date of the Mast special meeting is not postponed or adjourned more than an aggregate of 15 calendar days in connection with any postponements or adjournments in reliance on the preceding sentence. In the event that during the five business days prior to the date that the Mast special meeting is then scheduled to be held, Mast delivers a notice of an intent to make a Mast change in recommendation, Savara may direct Mast to recess or adjourn the Mast special meeting for up to five business days and Mast must promptly, and in any event no later than the next business day, recess or adjourn the Mast special meeting in accordance with the Savara s direction. In addition, in the event the Mast special meeting is scheduled to occur less than two business days after the publication of the announcement of the exchange ratio, Mast may, or Savara may direct Mast to, recess or adjourn the Mast special meeting until the date such that the meeting would be held on the date that is two business days following the publication of the announcement of the exchange ratio (in each case to the extent Savara or Mast believes in good faith that such recess or adjournment is required by applicable legal requirements or the rules of NYSE MKT).

Savara is obligated under the Merger Agreement to obtain written consents of its stockholders sufficient for purposes of (i) adopting the Merger Agreement and approving the merger and all other transactions contemplated by the Merger Agreement, (ii) acknowledging that such approval given is irrevocable and that such stockholder is aware of its rights to demand appraisal for its shares pursuant to Section 262 of the DGCL, and that such stockholder has received and

read a copy of Section 262 of the DGCL, (iii) acknowledging that by its approval of the merger such stockholder is not entitled to appraisal rights with respect to its shares in connection with the merger and thereby waives any rights to receive payment of the fair value of its Savara capital stock under

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Delaware Law and (iv) providing for the conversion of all Savara preferred stock into Savara common stock immediately prior to, and contingent upon the occurrence of, the effective time of the merger (clauses (i) though (iv) collectively, the Savara stockholder matters) no later than 11:59 pm on the date that is one business day prior to the special meeting of Mast stockholders to approve the merger. Stockholders of Savara that execute written consents approving the Savara stockholder matters may revoke such consent until 11:59 pm on the date that is one business day prior to the special meeting of Mast stockholders to approve the merger.

Covenants; Conduct of Business Pending the Merger

Savara agreed that to carry on its business in accordance with good commercial practice and to carry on its business in the usual, regular and ordinary course, and in substantially the same manner as conducted previously. Savara also agreed that, subject to certain limited exceptions, without the written consent of Mast, it will not, and will not permit its subsidiaries to do any of the following during the period prior to closing of the merger:

amend or otherwise change its certificate of incorporation or bylaws, or otherwise alter its corporate structure through merger, liquidation, reorganization or otherwise; sell, issue or grant, or authorize the issuance of, or make any commitments to do any of the foregoing, other than as contemplated by the Merger Agreement: any capital stock or other security (except for options or common stock issued to Savara employees, officers, or directors pursuant to the Savara Stock Option Plan or shares of Savara common stock issued upon the valid exercise of options); any option, warrant or right to acquire any capital stock or any other security; or any instrument convertible into or exchangeable for any capital stock or other security;

redeem, repurchase or otherwise acquire, directly or indirectly, any shares of Savara capital stock (other than pursuant a repurchase right in favor of Savara with respect to unvested shares at no more than cost);

incur any indebtedness or sell any debt securities or guarantee any debt securities or other obligations of others or sell, pledge, dispose of or create an encumbrance over any assets (except (i) for sales of assets in the ordinary course of business and in a manner consistent with past practice; (ii) for dispositions of obsolete or worthless assets or (iii) in connection with a post-closing financing or permitted bridge financing;

(i) declare, set aside, make or pay any dividend or other distribution (whether in cash, stock or property or any combination thereof) in respect of any of its capital stock, except that a wholly owned subsidiary may declare and pay a dividend to its parent, (ii) split, combine or reclassify any of its capital stock or issue or authorize or propose the issuance of any other securities in respect of, in lieu of or in substitution for shares of its capital stock or (iii) amend the terms of, repurchase, redeem or otherwise acquire, or permit any subsidiary to repurchase, redeem or otherwise acquire, any of its securities or any securities of its subsidiaries (except pursuant to any contract to which Savara or one of its subsidiaries is a party as of the date of the Merger Agreement), or propose to do any of the foregoing;

sell, assign, transfer, license, sublicense or otherwise dispose of any Savara intellectual property rights (other than in the ordinary course of business consistent with past practice);

(i) acquire (by merger, consolidation, or acquisition of stock or assets) any corporation, partnership or other business organization or division thereof or any other material property or assets, in each case with an individual value in excess of $100,000; (ii) enter into or amend any material terms of any material contract or grant any release or relinquishment of any material rights under any material contract, with new obligations or losses of rights in excess of $750,000 (with written notice provided by Savara to Mast prior to amending or entering into any such material contract with new obligations or losses of rights in excess of $500,000); (iii) authorize any capital expenditures or purchase of fixed assets which are, in the aggregate, in excess of $100,000, taken as a whole; or (iv) enter into or amend any contract, agreement, commitment or arrangement to effect any of the matters prohibited by any of the foregoing;forgive any loans to any person, including its employees, officers, directors or affiliates

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(provided that the conversion or settlement of any indebtedness of Savara or one of its subsidiaries into or for equity securities of Savara or one of its subsidiaries will not be deemed a forgiveness of such indebtedness);

take any action, other than as required by applicable legal requirements or GAAP, to change accounting policies or procedures;

make or change any material tax election inconsistent with past practices; adopt or change any tax accounting method; settle or compromise any material federal, state, local or foreign tax liability or agree to an extension of a statute of limitations for any assessment of any tax;

pay, discharge or satisfy any claims, liabilities or obligations (absolute, accrued, asserted or unasserted, contingent or otherwise), other than the payment, discharge or satisfaction in the ordinary course of business and consistent with past practice;

enter into any material partnership arrangements, joint development agreements or strategic alliances, other than in connection with a post-closing financing or refinancing; or

initiate any litigation, action, suit, proceeding, claim or arbitration or settle or agree to settle any litigation, action, suit, proceeding, claim or arbitration, in each case where Savara and its subsidiaries are claiming, or would be reasonably likely to receive or become obligated for a liability, of more than $100,000 individually.

Mast agreed that to carry on its business in accordance with good commercial practice and to carry on its business in the usual, regular and ordinary course, and in substantially the same manner as conducted previously. Mast also agreed that, subject to certain limited exceptions, without the written consent of Savara, it will not, and will not permit its subsidiaries to do any of the following during the period prior to closing of the merger:

except for the amendment and restatement of its amended and restated certificate of incorporation to effect the proposed [ ] reverse stock split, amend or otherwise change its certificate of incorporation or bylaws, or otherwise alter its corporate structure through merger, liquidation, reorganization or otherwise, or form any subsidiary);

except for contractual commitments in place at the time of the Merger Agreement, sell, issue or grant, or authorize the issuance of: any capital stock or other security (except for Mast common stock issued upon the valid exercise of outstanding employee Mast options under currently existing employee stock option plans or pursuant to currently outstanding warrants, as the case may be, which options, warrants, or rights, as the case may be, are outstanding on the date of the Merger Agreement);

redeem, repurchase or otherwise acquire, directly or indirectly, any shares of Mast capital stock, other than as may be required by the reverse stock split;

incur any indebtedness or sell, pledge, dispose of or create an encumbrance over any assets (except for (i) sales of assets in the ordinary course of business and in a manner consistent with past practice, (ii) dispositions of obsolete or worthless assets and (iii) any sale, lease, exchange, transfer, license, acquisition or disposition of any vepoloxamer assets of Mast or any related intellectual property rights to any third party outside the normal course of business, the terms of which are negotiated and consummated on a commercially reasonable, arms-length basis and which does not impose any post-closing indemnification or other material post-closing obligations upon Mast or any of its subsidiaries, including Savara following the closing of the merger);

accelerate, amend, or change the period (or permit any acceleration, amendment, or change) of exercisability of options or warrants or authorize cash payments in exchange for any options, except as may be provided under Mast s stock plan, contract, or the Merger Agreement, or as may be required by applicable legal requirements;

(i) declare, set aside, make or pay any dividend or other distribution (whether in cash, stock or property or any combination thereof) in respect of any of its capital stock, except that a wholly owned subsidiary

may declare and pay a dividend to its parent, (ii) split, combine or reclassify any of its capital stock or issue or authorize or propose the issuance of any other securities in respect of, in lieu of or in substitution for shares of its capital stock or (iii) amend the terms of, repurchase, redeem or otherwise acquire, or permit any subsidiary to repurchase, redeem or otherwise acquire, any of its securities or any securities of its Subsidiaries (except pursuant to any contract to which Mast or one of its subsidiaries is a party as of the date of the Merger Agreement), or propose to do any of the foregoing;

sell, assign, transfer, license, sublicense or otherwise dispose of any Mast s intellectual property rights (other than non-exclusive licenses in the ordinary course of business consistent with past practice);

(i) acquire (by merger, consolidation, or acquisition of stock or assets) any corporation, partnership or other business organization or division thereof or any other material property or assets, or allow any material property or assets to become subject to any encumbrance; (ii) enter into or amend any material terms of any material contract (other than solely to decrease any payment obligation of Mast or one of its subsidiaries) or grant any release or relinquishment of any material rights under any material contract, with new obligations or losses of rights in excess of $50,000 in the aggregate; (iii) authorize any capital expenditures or purchase of fixed assets which are, in the aggregate, in excess of $50,000, taken as a whole; or (iv) enter into or amend any contract, agreement, commitment or arrangement to effect any of the matters prohibited by any of the foregoing;

forgive any loans to any person, including its employees, officers, directors or affiliates (provide that the conversion or settlement of any indebtedness of Mast or one of its subsidiaries into or for equity securities of Mast or one of its subsidiaries shall not be deemed a forgiveness of such indebtedness);

(i) increase the wages, salary, commissions, fringe benefits, or other compensation or remuneration payable or to become payable to its directors, officers, employees, or consultants; (ii) grant any severance or termination pay to, or enter into or amend any employment or severance agreement with, any director, officer, employee, or consultant; (iii) establish, adopt, enter into, or amend any collective bargaining, bonus, profit sharing, thrift, compensation, stock option, restricted stock, pension, retirement, deferred compensation, employment, termination, severance, change of control or other plan, agreement, trust, fund, policy, payment, benefit, or arrangement of or to any director, officer, consultant, or employee, except for bonus awards in the ordinary course of business consistent with base practice or bonus awards contingent upon the completion of the transactions or payments, including any severance, termination, or change of control payments, in compliance with any such agreement or plans existing as of the date of the Merger Agreement;

hire any directors, officers, employees or consultants or terminate any directors or officers;

take any action, other than as required by applicable legal requirements or GAAP, to change accounting policies or procedures;

make or change any material tax election inconsistent with past practices, adopt or change any tax accounting method, or settle or compromise any material federal, state, local or foreign tax liability or agree to an extension of a statute of limitations for any assessment of any tax;

pay, discharge, satisfy, modify or renegotiate any claims or liabilities, other than the payment, discharge or satisfaction of liabilities reflected or reserved against in the financial statements of Mast, or payments, discharges or satisfactions made in the ordinary course of business and consistent with past practice;

enter into any material partnership arrangements, joint development agreements or strategic alliances;

accelerate the collection of, or otherwise modify Mast s customary accounting or treatment of, any receivables outside the ordinary course of business consistent with past practice;

sell, assign, convey or fail to maintain or renew any Mast permits, licenses, authorizations, variances, exemptions, orders and approvals from governmental authorities which are necessary to the operation of the business of Mast and its subsidiaries taken as a whole;

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initiate any litigation, action, suit, proceeding, claim or arbitration or settle or agree to settle any litigation, action, suit, proceeding, claim or arbitration, in each case where Mast is claiming, or would be reasonably likely to receive or become obligated for a liability, of more than $100,000 individually;

after the parties agree to the calculation of net cash pursuant to the Merger Agreement, dispose of any assets or otherwise take any actions other than in the ordinary course of business consistent with past practice so as to cause the final calculation of net cash to differ materially from actual net cash as of the date of the closing of the merger; or

take any action that would cause Mast s representation in the Merger Agreement that it is not a shell company to become inaccurate.

Regulatory Approvals

Mast and Savara agreed:

that each party would use its commercially reasonable efforts to file or otherwise submit, all applications, notices, reports and other documents reasonably required to be filed by such party with or otherwise submitted by such party to any governmental entity with respect to the merger and to submit promptly any additional information requested by any such governmental entity;

to prepare and file, if any, (a) the notification and report forms required to be filed under the HSR Act and (b) any notification or other document required to be filed in connection with the merger under any applicable foreign legal requirement relating to antitrust or competition matters; and

to respond as promptly as is practicable in compliance with: (i) any inquiries or requests received from the Federal Trade Commission or the Department of Justice for additional information or documentation; and (ii) any inquiries or requests received from any state attorney general, foreign antitrust or competition authority or other governmental entity in connection with antitrust or competition matters.

Access to Information

Mast and Savara agreed to:

provide reasonable access to the other party during the period prior to the closing of the merger, to such party s properties, books, contracts, commitments and records (including tax records) and, during such period, to furnish promptly to the other all information concerning its business, properties and personnel as such other party may reasonably request, and each will make available to the other the appropriate individuals (including attorneys, accountants and other professionals) for discussion of the other s business, properties and personnel as either party may reasonably request; provided that each party reserved the right to withhold any information if access to such information would be reasonably likely to result in any such party forfeiting attorney-client privilege between it and its counsel with respect to such information;

promptly provide the other party with copies of: (i) all material operating and financial reports prepared by such party (or their respective their representatives), as applicable, for such party s senior management; (ii) any written materials or communications sent by or on behalf of such party to its stockholders; (iii) any material notice, document or other communication sent by or on behalf of any of such party to any third party to any material contract, as applicable, or sent to such party by any third party to any material contract, as applicable, (other than any communication that relates solely to routine commercial transactions and that is of the type sent in the ordinary course of business and consistent with past practices); (iv) any notice, report or other document filed with or sent to any governmental entity in connection with the merger or any of the transactions contemplated thereby; and (v) any material notice, report or other document received from any governmental entity; and

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keep such information confidential in accordance with the terms of the currently effective confidentiality agreement between the parties; provided that Savara may make disclosure of such information pursuant to the terms of the Merger Agreement, including in connection with a post-closing financing or refinancing (provided that any third party receiving such information shall be required to execute a non-disclosure agreement on customary terms with respect to any information disclosed in connection therewith).

Financing

Savara

The Merger Agreement contemplates that Savara may effect a permitted bridge financing, a post-closing financing or a refinancing.

A permitted bridge financing means the sale and issuance of debt or equity securities of Savara to former or existing stockholders or other investors or their respective affiliates that Savara or its subsidiaries in an amount not to exceed $10,000,000 without Mast s prior written consent. Any shares of Savara capital stock issued, or issuable upon the conversion or exercise of any right or contract issued or entered into, in connection with a permitted bridge financing will not be included in the calculation of Savara fully diluted outstanding shares, and accordingly, any such shares issued or issuable in connection with a permitted bridge financing will not affect the calculation of Mast s net cash or the exchange ratio.

A post-closing financing means any investment or financing by any third party which contemplates the sale or issuance of debt or equity securities of Mast or any of its subsidiaries (including securities convertible, exercisable or exchangeable into such debt or equity securities) contemporaneous with or following the consummation of the merger. Pursuant to the Merger Agreement, any such issuance in connection with a post-closing financing will not adjust the calculation of the exchange ratio.

A refinancing means the renegotiating and refinancing the terms of all or any portion of the aggregate indebtedness and other obligations of Mast under the Hercules Agreement (including all principal, prepayment premiums, penalties and any other fees and expenses required to satisfy such indebtedness and obligations, and all accrued interest or penalties on any of the foregoing, in each case, as of immediately prior to the closing of the Merger), which may or not include obtaining a new lender in order to replace any indebtedness outstanding and owed to Hercules, in each case effective on or after the effective time of the merger.

Prior to the effective time of the merger, Mast must use its commercially reasonable efforts, and must cause each its subsidiaries and representatives to use their respective commercially reasonable efforts, to cooperate as reasonably requested by Savara with any post-closing financing or refinancing. Mast must not, and Mast must use its commercially reasonable efforts to cause its subsidiaries and representatives not to intentionally or knowingly take any action to with respect to any third party in connection with a refinancing, post-closing financing or permitted bridge financing other than to the extent such action was reasonably requested to be taken by Savara consistent with the Merger Agreement.

All reasonable out of pocket costs and expenses incurred by Mast, its subsidiaries and representatives as a result of cooperating with Savara in connection with a refinancing, post-closing financing or permitted bridge financing will be Savara s responsibility and will not otherwise reduce the Mast s net cash.

Mast

The Merger Agreement permits Mast, pursuant to an at the market equity offering program, to sell up to an aggregate gross sales proceeds of $18 million from time to time, pursuant to the sales agreement by and between Mast and Cowen and Company, LLC as sales agent (such program, the **ATM program**).

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The Merger Agreement contemplates that an issuance of shares of Mast common stock under the ATM program can be classified as either a dilutive atm issuance or a non-dilutive atm issuance.

A dilutive atm issuance means any issuance of shares of Mast common stock under the ATM program to the extent the proceeds of such issuance are required to be included in the calculation of Mast s net cash in order for its net cash as of the effective time of the merger to not be less than zero dollars ($0.00).

A non-dilutive atm issuance means any issuance of shares of Mast common stock under the ATM program to the extent the proceeds of such sale are not required to be included in the calculation of Mast s net cash in order for its net cash as of the effective time of the merger to not be less than zero dollars ($0.00).

To the extent any portion of an issuance or series of issuances of shares of Mast common stock under the ATM program could be characterized as either dilutive ATM issuances or non-dilutive ATM issuances as a result of the fungibility of the proceeds therefrom, shares of Mast common stock shall be allocated to the portion considered dilutive ATM issuances in the order of lesser proceeds-per-share to greater proceeds-per-share until, by including the proceeds received in respect of the shares so allocated in the calculation of Mast s net cash would equal zero dollars ($0.00), after which point all other such shares of Mast common stock shall be considered non-dilutive ATM issuances.

Other Agreements

Mast and Savara agreed that:

- from and after the effective time of the merger, Mast and the surviving corporation will fulfill and honor in all respects the obligations of Savara and Mast which existed prior to the date of the Merger Agreement to indemnify each of Savara and Mast s present and former directors and officers, and their heirs, executors and assigns;

- Savara may secure a tail policy on its existing directors and officers liability insurance policy for a period of six years;

- Mast must secure a directors and officers liability tail policy on Mast s existing directors and officers for a period of six years;

- the parties will consult with each other before issuing any press release or otherwise making any public statements with respect to the merger and Merger Agreement and will not issue any such press release or make any such public statement without the prior consent of the other party, subject to certain exceptions;

- each party must promptly notify the other party of any litigation brought, or threatened, against such party and/or members of its board of directors or any of its officers relating to the Merger Agreement and the transactions contemplated thereby, or otherwise, and must keep the other party informed on a reasonably current basis with respect to the status thereof. Each party must also give the other party the right to review

and comment on all material filings or responses to be made by such party in connection with the foregoing and, no settlement shall be agreed to in connection with the foregoing without the other party s prior written consent;

each party will give prompt notice to the other of (i) the occurrence, or non-occurrence, of any event the occurrence, or non-occurrence, of which would be reasonably likely to cause any representation or warranty contained in the Material Agreement to be untrue or inaccurate such that the conditions to closing applicable to such party would fail to be satisfied as of the closing of the merger, (ii) any failure of such party materially to comply with or satisfy any covenant, condition or agreement to be complied with or satisfied by it under the Merger Agreement such that the conditions to closing applicable to such party would fail to be satisfied as of the closing of the merger, (iii) with respect to mast, any issuances or sales under its ATM program to the extent Mast has a good faith belief that such issuance

or sale will, or will be reasonably likely to, constitute, either in whole or in part, a non-dilutive ATM issuance; and (iv) whether any holder of shares of Mast capital stock or any security or other right convertible into or exercisable for shares of Mast capital stock has made any demand or request for the repurchase of any such share, security or right;

each party will give prompt notice to the other of: (i) any notice or other communication from any person alleging that the consent of such person is or may be required in connection with the merger or other transactions contemplated by the Merger Agreement; (ii) any notice or other communication from any governmental entity in connection with the merger or other transactions contemplated by the Merger Agreement; (iii) the occurrence of a default or event that, with notice or lapse of time or both, will become a default under a Savara material contract; and (v) any change that would be considered reasonably likely to result in a material adverse effect;

each party will cooperate in the preparation, execution and filing of all materials regarding any real property transfer or gains, sales, use, transfer, value added, stock transfer and stamp taxes, any transfer, recording, registration and other fees, and any similar taxes which become payable in connection with the with the merger and other transactions contemplated by the Merger Agreement that are required or permitted to be filed on or before the effective time of the merger;

Mast will file the amendment and restatement of its amended and restated certificate of incorporation (effecting the [ ] reverse stock split and the name change from Mast Therapeutics, Inc. to Savara Inc.) with the Secretary of State of the State of Delaware to become effective immediately prior to the effective time of the merger;

to take all such steps as may be required (to the extent permitted under applicable legal requirements) to cause any acquisition of Mast common stock (including derivative securities with respect to such stock) by each individual who is or will be subject to the reporting requirements of Section 16(a) of the Exchange Act with respect to mast, to be exempt under Rule 16b-3 under the Exchange Act;

Savara will obtain written consent of its stockholders to, effective upon the date of the closing of the merger, terminate the certain stockholder agreements;

if required by any warrant to purchase shares of Mast capital stock, Mast will deliver notice to the holders of such warrants with respect to the merger and the transactions contemplated by the Merger Agreement and the rights of the holders in connection therewith;

Mast will terminate, at Savara s request, each Mast 401K plan or any other Mast employment plan related to medical, dental, life insurance or similar benefits, with such terminations to be effective as of the day immediately preceding the date of the closing of the merger or as soon as reasonably practicable after the consummation of the merger, as applicable;

the parties will use their respective reasonable best efforts to cause the merger to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the Code), including by executing and delivering customary tax representation letters to Savara s and/or Mast s counsel, as applicable. None of the parties may take any actions, fail to take any actions, or cause any action to be taken which would reasonably be expected to prevent the merger from qualifying as a reorganization under Section 368(a) of the Code;

the parties will treat the merger as a reorganization within the meaning of Section 368(a) of the Code for U.S. federal, state and other relevant tax purposes, unless otherwise required;

prior to the closing of the merger, the parties must use commercially reasonable efforts to engage in discussions with Hercules regarding a renegotiated, refinancing or new written agreement or arrangement with Hercules related to the existing aggregate amount of all indebtedness and other obligations of Mast under the Hercules Agreement, including all principal, prepayment premiums, penalties and any other fees and expenses required to satisfy such indebtedness and obligations, and all accrued interest or penalties on any of the foregoing, in each case, as of immediately prior to the closing of the merger;

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Mast must submit to the holders of Mast common stock at the Mast special meeting a proposal to approve and adopt the amendment and restatement of the amended and restated certificate of incorporation of Mast authorizing the Mast Board to effect a [ ] reverse stock split of all outstanding shares of Mast common stock. Mast must cause the [ ] reverse stock split to be implemented and take effect immediately prior to the effective time of the merger;

prior to the closing of the merger, Savara must deliver the Lock-up Agreement to each of its stockholders and must use its commercially reasonable efforts to cause its stockholders to enter into such Lock-up Agreement;

Mast will (i) to the extent required by the rules and regulations of NYSE MKT (A) prepare and submit to NYSE MKT an application for the listing of the shares of Mast common stock to be issued in the merger and use its reasonable commercial efforts to cause such shares to be approved for listing, (B) approve the [ ] reverse stock split, and (C) approve the new NYSE MKT ticker symbol, and (ii) to the extent required by NYSE MKT Company Guide, file an initial listing for Mast common stock on NYSE MKT (the NYSE MKT listing application) and use its reasonable commercial efforts to cause such NYSE MKT listing application to be approved prior to the effective time of the merger; and

prior to the closing of the merger, Savara and Mast must use commercially reasonable efforts to engage in discussions with Duke University regarding a renegotiated, restructured or new written agreement or arrangement with Duke University related to that certain Investigator-Sponsored Clinical Study and Research Agreement between Aires and Duke University, dated March 3, 2016.

Termination of the Merger Agreement

The Merger Agreement may be terminated at any time before the completion of the merger, whether before or after the required stockholder approvals to complete the merger have been obtained, as set forth below:

1. by mutual written consent of Savara and Mast duly authorized by each of their respective board of directors;

2. by either Mast or Savara if the merger has not been consummated by July 6, 2017 (provided, however, that the right to terminate the Merger Agreement will not be available to any party whose failure to fulfill any obligation under the Merger Agreement has been a primary cause of the failure of the merger to occur on or before such date); provided, in the event that the SEC has not declared effective the registration statement on Form S-4, of which this proxy statement/prospectus/information statement is a part, by July 6, 2017, then this right to terminate will not be available for an additional 60 days upon request of either party;

3. by Mast or Savara if a court of competent jurisdiction or governmental, regulatory or administrative agency or commission has issued a nonappealable final order, decree or ruling or taken any other action, in each case having the effect of permanently restraining, enjoining or otherwise prohibiting the merger;

4. by Mast if Savara did not obtain the written consent of a requisite number of its stockholders necessary to adopt the Merger Agreement and approve the merger and related matters by 11:59 pm on the date that is one business day prior to the special meeting of Mast stockholders to approve the merger, but this right to terminate the Merger Agreement will not be available to Mast (i) once Savara obtains such approval or (ii) if Mast s failure to fulfill any obligation under the Merger Agreement was a primary cause of Savara s failure to obtain the written consent of a requite number of its stockholders necessary to adopt the Merger Agreement and approve the merger and related matters;

5. by Mast or Savara if the Mast special meeting has been held, and stockholders of Mast do not approve the merger or the issuance of Mast common stock in the merger at the Mast special meeting (including any adjournments and postponements thereof), but the right to terminate the Merger Agreement pursuant to this provision will not be available to any party whose failure to fulfill any obligation under

the Merger Agreement has been a primary cause of the failure of the Mast stockholders to approve the merger or the issuance of Mast common stock in the merger at the Mast special meeting;

6. by Savara, at any time prior to the approval by Mast s stockholders of the merger and the issuance of the shares of Mast common stock pursuant in the merger, if:

the Mast Board fails to recommend that the stockholders of Mast vote to approve the merger, the issuance of Mast common stock or the amendment and restatement of the amended and restated certificate of incorporation of Mast, including for purposes of effectuating the [ ] reverse stock split, or withdraws or modifies its recommendation;

Mast fails to include in this proxy statement/prospectus/information statement such recommendation;

Mast fails to hold the Mast special meeting within 60 days after the registration statement on Form S-4, of which this proxy statement/prospectus/information statement is a part, is declared effective under the Securities Act, other than to the extent that such registration statement is subject to a stop order or proceeding, or threatened proceeding by the SEC, seeking a stop order with respect to such registration statement, in which case such 60-day period will be tolled for the earlier of sixty days or so long as such stop order remains in effect or proceeding or threatened proceeding remains pending;

the Mast Board approves, endorses or recommends any acquisition proposal, as defined in the section entitled The Merger Agreement No Solicitation in this proxy statement/prospectus/information statement;

Mast enters into any letter of intent or similar document or any contract relating to any acquisition proposal, other than a confidentiality agreement permitted pursuant to the Merger Agreement;

a tender offer or exchange offer or similar transaction constituting an acquisition proposal with respect to Mast (other than a post-closing financing) has commenced, or the intention to commence such a transaction has been publicly announced by a third party, and within 10 days thereof the Mast Board fails to recommend that Mast s stockholders reject such transaction and reaffirm its recommendation that Mast stockholders approve the merger, the issuance of Mast common stock or the amendment and restatement of the amended and restated certificate of incorporation of Mast, including for purposes of effectuating the [ ] reverse stock split; or

Mast or any director, officer or agent of Mast willfully and intentionally breaches the no solicitation provisions set forth in the Merger Agreement (each of the above clauses is referred to as a Mast triggering event);

7. by Mast, at any time prior to the adoption of the Merger Agreement by the stockholders of Savara if:

the Savara Board fails to recommend that the Savara stockholders vote to adopt and approve the Merger Agreement or withdraws or modifies its recommendation;

Savara fails to include in this proxy statement/prospectus/information statement such recommendation;

the Savara Board approves, endorses or recommends any acquisition proposal, as defined in the section entitled The Merger Agreement No Solicitation in this proxy statement/prospectus/information statement;

Savara enters into any binding letter of intent or similar document or any contract relating to any acquisition proposal, other than a post-closing financing, refinancing, or confidentiality agreement permitted pursuant to the Merger Agreement;

a tender offer or exchange offer or similar transaction constituting an acquisition proposal with respect to Savara (other than a post-closing financing) has commenced, or the intention to commence such a transaction has been publicly announced by a third party, and within 10 days thereof the Savara Board fails to recommend that Savara s stockholders reject such transaction and reaffirm its recommendation that Savara stockholders adopt and approve the Merger Agreement; or

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Savara or any director, officer or agent of Savara willfully and intentionally breaches the no solicitation provisions set forth in the Merger Agreement (each of the above clauses is referred to as an Savara triggering event);

8. by Mast if Savara has breached any of its representations, warranties, covenants or agreements contained in the Merger Agreement or if any representation or warranty of Savara has become inaccurate, in either case such that the conditions to the closing of the merger would not be satisfied as of the time of such breach or as of the time such representation or warranty has become inaccurate, but if such breach or inaccuracy is curable, then the Merger Agreement will not terminate pursuant to this provision as a result of such particular breach or inaccuracy unless such or inaccuracy remains uncured as of the tenth business day following the date Mast delivers written notice to Savara of such breach or inaccuracy and its intention to terminate the Merger Agreement pursuant to this provision; provided that no termination may be made pursuant to this provision solely as a result of failure Savara to receive the requisite approval of its stockholders to adopt and approve the Merger Agreement; and

9. by Savara if Mast has breached any of its representations, warranties, covenants or agreements contained in the Merger Agreement or if any representation or warranty of Mast has become inaccurate, in either case such that the conditions to the closing of the merger would not be satisfied as of the time of such breach or as of the time such representation or warranty has become inaccurate, but if such breach or inaccuracy is curable, then the Merger Agreement will not terminate pursuant to this provision as a result of such particular breach or inaccuracy unless such or inaccuracy remains uncured as of the tenth business day following the date Savara delivers written notice to Mast of such breach or inaccuracy and its intention to terminate the Merger Agreement pursuant to this provision; provided that no termination may be made pursuant to this provision solely as a result of failure of Mast to receive the requisite approval of its stockholders to approve the merger, the issuance of Mast common stock or the amendment and restatement of the amended and restated certificate of incorporation of Mast, including for purposes of effectuating the [ ] reverse stock split.

Termination Fee

Fee payable by Mast

Mast must pay Savara a termination fee of $1.8 million if:

(i) the Merger Agreement is terminated pursuant to clauses 2, 5 and 9 above, (ii) at any time before such termination and before the Mast special meeting an acquisition proposal with respect to Mast has been publicly announced, disclosed or otherwise communicated to Mast s board of directors or to Mast s stockholders generally and (iii) within nine months after the date of such termination, Mast enters into a definitive agreement with respect to any acquisition transaction or consummates an acquisition transaction as defined above in the section entitled The Merger Agreement No Solicitation, (with all references to 15% in the definition of acquisition transaction being treated as references to 50%); or

Savara terminates the Merger Agreement pursuant to clause 6 above.

Mast must reimburse Savara for all reasonable fees and expenses incurred by Savara in connection with the Merger Agreement and the transactions contemplated thereby, up to a maximum of $250,000, if:

the Merger Agreement is terminated by Savara pursuant to clauses 5 or 9 above; or

the Merger Agreement is terminated by Mast pursuant to clauses 2 or 5 above, but only if at such time Savara would have been permitted to terminate the Merger Agreement pursuant to clauses 5 or 9 above.

If Savara is entitled to reimbursement for expenses and the $1.8 million termination fee, Mast s liability is capped at $1.8 million and in no event will Mast be required to pay Savara any amount in excess of $1.8 million in the event of termination of the Merger Agreement.

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Fee payable by Savara

Savara must pay Mast a termination fee of $2.5 million if:

(i) the Merger Agreement is terminated pursuant to clauses 2, 4 and 8 above, (ii) at any time before such termination and before the earlier of the Mast special meeting or the delivery by Savara of the written consent of the requisite number of its stockholders necessary to adopt and approve the Merger Agreement by 11:59 pm on the date that is one business day prior to the special meeting of Mast stockholders to approve the merger, an acquisition proposal with respect to Savara has been publicly announced, disclosed or otherwise communicated to Savara s board of directors or to Savara s stockholders generally and (iii) within nine months after the date of such termination, Savara enters into a definitive agreement with respect to any acquisition transaction or consummates an acquisition transaction as defined above in the section entitled The Merger Agreement No Solicitation, (with all references to 15% in the definition of acquisition transaction being treated as references to 50%); or Mast terminates pursuant to clause 7 above.

Savara must reimburse Mast for all reasonable fees and expenses incurred by Mast in connection with the Merger Agreement and the transactions contemplated thereby, up to a maximum of $250,000 if:

the Merger Agreement is terminated by Mast pursuant to clauses 4 or 8 above; or

the Merger Agreement is terminated by Savara pursuant to clauses 2 or 4 above, but only if at such time Mast would have been permitted to terminate the Merger Agreement pursuant to clauses 4 or 8 above.

If Mast is entitled to reimbursement for expenses and the $2.5 million termination fee, Savara s liability is capped at $2.5 million and in no event will Savara be required to pay Mast any amount in excess of $2.5 million in the event of termination of the Merger Agreement.

Amendment

The Merger Agreement may be amended by the parties at any time prior to the effective time of the merger, except that after the Merger Agreement has been adopted and approved by the stockholders of Mast or Savara, no amendment which by legal requirements requires further approval by the stockholders of Mast or Savara, as the case may be, shall be made without such further approval.

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AGREEMENTS RELATED TO THE MERGER

Voting Agreements

In order to induce Mast to enter into the Merger Agreement, Savara directors, officers and certain securityholders of Savara who beneficially own or control approximately 30% of Savara s outstanding capital stock on an as-converted to common stock basis as of December 31, 2016 entered into voting agreements in favor of Savara pursuant to which, among other things, each of these securityholders agreed, solely in its capacity as a securityholder, to vote all of its shares of Savara capital stock, if any, in favor of the adoption of the Merger Agreement and the approval of the merger and the other transactions contemplated by the Merger Agreement, and any other matter that is reasonably necessary to facilitate the consummation of the merger and the other transactions contemplated by the Merger Agreement, against any Acquisition Proposal, as defined in the Merger Agreement (other than a post-closing financing, permitted bridge financing or refinancing), and against any other matter that would reasonably be expected to impede, interfere with, delay, postpone or adversely affect the merger or any of the transactions contemplated by the Merger Agreement. These securityholders also granted Savara an irrevocable proxy to their respective shares of Savara capital stock in accordance with the voting agreements, with such proxy to become effective solely in the event of any failure by such securityholders to act in accordance with their obligations under the voting agreement. These securityholders also agreed not to exercise any rights that they may have to demand appraisal with respect to their shares of Savara capital stock in connection with the merger.

Under the voting agreement, subject to certain exceptions, the securityholders also agreed not to sell or transfer Savara capital stock and securities held by them until the earliest of the termination of the Merger Agreement, the effective time of the merger or such date and time as designated by Savara in writing to such securityholders. To the extent that any such sale or transfer is permitted pursuant to the exceptions included in the voting agreement, each person to whom any shares of Savara capital stock or securities are so sold or transferred must agree in writing to be bound by the terms and provisions of the voting agreement.

In addition, in order to induce Savara to enter into the Merger Agreement, Mast executive officers and directors who beneficially own or control less than one percent of the outstanding shares of Mast common stock as of February 2, 2017 entered into voting agreements in favor of Mast pursuant to which, among other things, each of these persons agreed, solely in his or her capacity as a securityholder, to vote all of his or her shares of Mast capital stock, if any, in favor of the adoption of the Merger Agreement and the approval of the merger and the other transactions contemplated by the Merger Agreement, and any other matter that is reasonably necessary to facilitate the consummation of the merger and the other transactions contemplated by the Merger Agreement, against any Acquisition Proposal, as defined in the Merger Agreement, and against any other matter that would reasonably be expected to impede, interfere with, delay, postpone or adversely affect the merger or any of the transactions contemplated by the Merger Agreement. These securityholders also granted Mast an irrevocable proxy to their respective shares of Mast capital stock in accordance with these voting agreement, with such proxy to become effective solely in the event of any failure by such securityholders to act in accordance with their obligations under the voting agreement.

Under the voting agreement, subject to certain exceptions, the securityholders also agreed not to sell or transfer Mast capital stock and securities held by them until the earliest of the termination of the Merger Agreement, the effective time of the merger or such date and time as designated by Mast in writing to such securityholders. To the extent that any such sale or transfer is permitted pursuant to the exceptions included in the voting agreement, each person to whom any shares of Mast capital stock or securities are so sold or transferred must agree in writing to be bound by the terms and provisions of the voting agreement.

Lock-Up Agreements

Savara s officers, directors and certain other stockholders of Savara and Mast s executive officers and directors also entered into lock-up agreements, pursuant to which such securityholders agreed not to, except in

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limited circumstances, (i) offer, pledge, sell, contract to sell, sell any option or contract purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise transfer or dispose of or lend any shares of Mast common stock or securities convertible into, exercisable or exchangeable for or that represent the right to receive Mast common stock whether then owned or thereafter acquired (the Securities), (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Securities, (iii) make any demanded for or exercise any right with respect to the registration of any Mast common stock or any security convertible into or exercisable or exchangeable for Mast common stock or (iv) publicly disclose the intention to do any of the foregoing (each such restriction, the lock-up restrictions).

The lock-up restrictions automatically terminate with respect to one-third of the Securities on each of (i) the six month anniversary of the date of the closing of the merger, (ii) the eight month anniversary of the date of the closing of the merger and (iii) the ten month anniversary of the date of the closing of the merger.

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MATTERS BEING SUBMITTED TO A VOTE OF MAST STOCKHOLDERS

Mast Proposal No. 1: Approval of the Merger and the Issuance of Common Stock in the Merger

At the Mast special meeting, Mast stockholders will be asked to approve the merger and the issuance of Mast common stock pursuant to the Merger Agreement. Immediately following the merger, it is expected that Savara stockholders, warrantholders and optionholders will own approximately 76% of the fully-diluted common stock of Mast, with existing Mast stockholders and optionholders holding approximately 24% of the fully-diluted common stock of Mast.

The terms of, reasons for and other aspects of the Merger Agreement, the merger and the issuance of Mast common stock pursuant to the Merger Agreement are described in detail in the other sections in this proxy statement/prospectus/information statement.

Required Vote; Recommendation of Board of Directors

Presuming a quorum is present, the affirmative vote of the holders of a majority of the shares of Mast common stock having voting power present in person or represented by proxy at the Mast special meeting is required for approval of Mast Proposal No. 1. **Each of Proposal Nos. 1, 2 and 3 are conditioned upon each other. Therefore, the merger cannot be consummated without the approval of Proposal Nos. 1, 2 and 3.**

THE MAST BOARD UNANIMOUSLY RECOMMENDS THAT THE MAST STOCKHOLDERS VOTE FOR MAST PROPOSAL NO. 1 TO APPROVE THE MERGER AND THE ISSUANCE OF MAST COMMON STOCK PURSUANT TO THE MERGER AGREEMENT.

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Mast Proposal No. 2: Approval of the Amendment and Restatement of the Amended and Restated Certificate of Incorporation of Mast Effecting the 1-for-[ ] Reverse Stock Split

General

At the Mast special meeting, Mast stockholders will be asked to approve the amendment and restatement of the amended and restated certificate of incorporation of Mast effecting a reverse stock split of the issued shares of Mast common stock, at a ratio of 1-for-[ ]. Upon the effectiveness of the amendment and restatement of the amended and restated certificate of incorporation of Mast effecting the reverse stock split, or the split effective time, the issued shares of Mast common stock immediately prior to the split effective time will be reclassified into a smaller number of shares such that a Mast stockholder will own one new share of Mast common stock for each [ ] shares of issued common stock held by that stockholder immediately prior to the split effective time.

If Mast Proposal No. 2 is approved, the reverse stock split would become effective in connection with the closing of the merger.

The Mast Board may determine to effect the reverse stock split, if it is approved by the stockholders, even if the other proposals to be acted upon at the meeting are not approved, including the merger and the issuance of shares of Mast common stock pursuant to the Merger Agreement.

The form of the amendment and restatement of the amended and restated certificate of incorporation of Mast to effect the reverse stock split, as more fully described below, will effect the reverse stock split but will not change the number of authorized shares of common stock or preferred stock, or the par value of Mast common stock or preferred stock.

Purpose

The Mast Board approved the proposal approving the amendment and restatement of the amended and restated certificate of incorporation of Mast effecting the reverse stock split for the following reasons:

- the Mast Board believes effecting the reverse stock split is necessary to maintain the listing of the combined company s post-merger common stock given the NYSE MKT s minimum market price requirement for initial listings and to help avoid a delisting of Mast common stock from the NYSE MKT in the future; and

- the Mast Board believes a higher stock price may help generate investor interest in Mast and help Mast attract and retain employees.

If the reverse stock split successfully increases the per share price of Mast common stock, the Mast Board believes this increase may increase trading volume in Mast common stock and facilitate future financings by Mast.

The reverse stock split is also required to ensure Mast may issue a sufficient authorized amount of Mast common stock to consummate the merger. If the requisite stockholders of Mast approve the merger and the issuance of Mast common stock pursuant to the Merger Agreement but do not approve the 1-for-[ ] reverse stock split, Mast will not have a sufficient authorized amount of Mast common stock to consummate the merger.

Potential Increased Investor Interest

On [ ], 2017, Mast common stock closed at $[ ] per share. An investment in Mast common stock may not appeal to brokerage firms that are reluctant to recommend lower priced securities to their clients. Investors may also be dissuaded from purchasing lower priced stocks because the brokerage commissions, as a percentage of the total transaction, tend to be higher for such stocks. Moreover, the analysts at many brokerage firms do not monitor the trading activity or otherwise provide coverage of lower priced stocks. Also, the Mast Board believes that most investment funds are reluctant to invest in lower priced stocks.

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There are risks associated with the reverse stock split, including that the reverse stock split may not result in an increase in the per share price of Mast common stock.

Mast cannot predict whether the reverse stock split will increase the market price for Mast common stock. The history of similar stock split combinations for companies in like circumstances is varied. There is no assurance that:

- the market price per share of Mast common stock after the reverse stock split will rise in proportion to the reduction in the number of shares of Mast common stock outstanding before the reverse stock split;
- the reverse stock split will result in a per share price that will attract brokers and investors who do not trade in lower priced stocks;
- the reverse stock split will result in increased trading volume in Mast common stock;
- the reverse stock split will result in a per share price that will increase the ability of Mast to attract and retain employees; or
- that Mast will otherwise meet the requirements of NYSE MKT.

The market price of Mast common stock will also be based on performance of Mast and other factors, some of which are unrelated to the number of shares outstanding. If the reverse stock split is effected and the market price of Mast common stock declines, the percentage decline as an absolute number and as a percentage of the overall market capitalization of Mast may be greater than would occur in the absence of a reverse stock split. Furthermore, the liquidity of Mast common stock could be adversely affected by the reduced number of shares that would be outstanding after the reverse stock split.

Principal Effects of the Reverse Stock Split

The amendment and restatement of the amended and restated certificate of incorporation of Mast effecting the reverse stock split is set forth in Annex D to this proxy statement/prospectus/information statement.

The reverse stock split will be effected simultaneously for all outstanding shares of Mast common stock. The reverse stock split will affect all of the Mast stockholders uniformly and will not affect any stockholder s percentage ownership interests in Mast, except to the extent that the reverse stock split results in any of the Mast stockholders owning a fractional share. Common stock issued pursuant to the reverse stock split will remain fully paid and nonassessable. The reverse split does not affect the total proportionate ownership of Mast following the merger. The reverse stock split will not affect Mast continuing to be subject to the periodic reporting requirements of the Exchange Act.

Procedure for Effecting Reverse Stock Split and Exchange of Stock Certificates

If the Mast stockholders approve the amendment and restatement of the amended and restated certificate of incorporation of Mast effecting the reverse stock split, and if the Mast Board still believes that a reverse stock split is

in the best interests of Mast and its stockholders, Mast will file the amendment and restatement of the amended and restated certificate of incorporation with the Secretary of State of the State of Delaware at such time as the Mast Board has determined to be the appropriate split effective time. The Mast Board may delay effecting the reverse stock split without resoliciting stockholder approval. Beginning at the split effective time, each certificate representing pre-split shares will be deemed for all corporate purposes to evidence ownership of post-split shares.

As soon as practicable after the split effective time, stockholders will be notified that the reverse stock split and/or corporate name change have been effected. Mast expects that the Mast transfer agent will act as exchange agent for purposes of implementing the exchange of stock certificates. Holders of pre-split shares will be asked to surrender to the exchange agent certificates representing pre-split shares in exchange for certificates representing post-split shares in accordance with the procedures to be set forth in a letter of transmittal to be sent by Mast. In

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the event that Mast Proposal No. 3 is approved by Mast, the certificates reflecting the post-split shares will also reflect the change of the Mast corporate name to Savara Inc. No new certificates will be issued to a stockholder until such stockholder has surrendered such stockholder s outstanding certificate(s) together with the properly completed and executed letter of transmittal to the exchange agent. Any pre-split shares submitted for transfer, whether pursuant to a sale or other disposition, or otherwise, will automatically be exchanged for post-split shares. **Stockholders should not destroy any stock certificate(s) and should not submit any certificate(s) unless and until requested to do so.**

Fractional Shares

No fractional shares will be issued in connection with the reverse stock split. Stockholders of record who otherwise would be entitled to receive fractional shares because they hold a number of pre-split shares not evenly divisible by the number of pre-split shares for which each post-split share is to be reclassified, will be entitled, upon surrender to the exchange agent of certificates representing such shares, to a cash payment in lieu thereof at a price equal to the fraction to which the stockholder would otherwise be entitled multiplied by the closing price of the common stock on the NYSE MKT on the first trading day immediately following the split effective time. The ownership of a fractional interest will not give the holder thereof any voting, dividend, or other rights except to receive payment therefor as described herein.

By approving the amendment and restatement of the amended and restated certificate of incorporation of Mast effecting the reverse stock split, stockholders will be approving the combination of [ ] shares of Mast common stock into one share of Mast common stock.

Stockholders should be aware that, under the escheat laws of the various jurisdictions where stockholders reside, where Mast is domiciled, and where the funds will be deposited, sums due for fractional interests that are not timely claimed after the effective date of the split may be required to be paid to the designated agent for each such jurisdiction, unless correspondence has been received by Mast or the exchange agent concerning ownership of such funds within the time permitted in such jurisdiction. Thereafter, stockholders otherwise entitled to receive such funds will have to seek to obtain them directly from the state to which they were paid.

Potential Anti-Takeover Effect

Although the increased proportion of unissued authorized shares to issued shares could, under certain circumstances, have an anti-takeover effect, for example, by permitting issuances that would dilute the stock ownership of a person seeking to effect a change in the composition of the Mast Board or contemplating a tender offer or other transaction for the combination of Mast with another company, the reverse stock split proposal is not being proposed in response to any effort of which Mast is aware to accumulate shares of Mast common stock or obtain control of Mast, other than in connection with the merger, nor is it part of a plan by management to recommend a series of similar amendments to the Mast Board and stockholders. Other than the proposals being submitted to the Mast stockholders for their consideration at the Mast special meeting, the Mast Board does not currently contemplate recommending the adoption of any other actions that could be construed to affect the ability of third parties to take over or change control of Mast. For more information, please see the section entitled Risk Factors Risks Related to Mast s Common Stock.

Material U.S. Federal Income Tax Consequences of the Reverse Stock Split

The following is a discussion of the material U.S. federal income tax consequences of the reverse stock split to holders of Mast common stock, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local, or foreign tax laws are not discussed. This discussion is based on the Code, U.S. Treasury Regulations promulgated thereunder, judicial

decisions, and published rulings and administrative pronouncements of the IRS in effect as of the date of the merger. These authorities may change or be subject to differing interpretations. Any such change may be applied retroactively in a manner that could adversely affect a holder of Mast common stock.

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This discussion is limited to holders who hold their Mast common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to the particular circumstances of a Mast common stockholder, including the impact of the Medicare contribution tax on net investment income. In addition, it does not address consequences relevant to holders of Mast common stock that are subject to particular rules, including, without limitation:

- persons subject to the alternative minimum tax or Medicare contribution tax on net investment income;
- persons whose functional currency is not the U.S. dollar;
- persons holding Savara common stock as part of a hedge, straddle, or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- persons who are not U.S. Holders;
- banks, insurance companies, and other financial institutions;
- mutual funds, real estate investment trusts or regulated investment companies;
- brokers, dealers, or traders in securities;
- partnerships, other entities or arrangements treated as partnerships for U.S. federal income tax purposes, and other pass-through entities (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell Savara common stock under the constructive sale provisions of the Code;
- persons who hold or receive Savara common stock pursuant to the exercise of any employee stock options or otherwise as compensation;
- persons who hold Savara common stock as qualified small business stock pursuant to Section 1202 of the Code;

persons holding Savara common stock who exercise dissenters rights; and

tax-qualified retirement plans.

This discussion is limited to holders of Mast common stock that are U.S. Holders. For purposes of this discussion, a U.S. Holder is a beneficial owner of Mast common stock that, for U.S. federal income tax purposes, is or is treated as:

an individual who is a citizen or resident of the United States;

a corporation (or other entity taxable as a corporation for U.S. Federal income tax purposes) created or organized under the laws of the United States, any state thereof, or the District of Columbia;

an estate, the income of which is subject to U.S. federal income tax regardless of its source; or

a trust if either a court within the United States is able to exercise primary supervision over the administration of such trust and one or more United States persons (within the meaning of Section 7701(a)(30) of the Code) have the authority to control all substantial decisions of such trust, or the trust has a valid election in effect under applicable Treasury Regulations to be treated as a United States person for U.S. federal income tax purposes.

If an entity treated as a partnership for U.S. federal income tax purposes holds Mast common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding Mast common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

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In addition, the following discussion does not address the tax consequences of the reverse stock split under state, local and foreign tax laws. Furthermore, the following discussion does not address any tax consequences of transactions effectuated before, after or at the same time as the reverse stock split, whether or not they are in connection with the reverse stock split.

INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE REVERSE STOCK SPLIT ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Tax Consequences of the Reverse Stock Split

The reverse stock split should constitute a recapitalization for U.S. federal income tax purposes. As a result, a U.S. Holder of Mast common stock generally should not recognize gain or loss upon the reverse stock split, except with respect to cash received in lieu of a fractional share of Mast common stock, as discussed below. A U.S. Holder s aggregate tax basis in the shares of Mast common stock received pursuant to the reverse stock split should equal the aggregate tax basis of the shares of the Mast common stock surrendered (excluding any portion of such basis that is allocated to any fractional share of Mast common stock), and such U.S. Holder s holding period in the shares of Mast common stock received should include the holding period in the shares of Mast common stock surrendered. Treasury Regulations provide detailed rules for allocating the tax basis and holding period of the shares of Mast common stock surrendered to the shares of Mast common stock received in a recapitalization pursuant to the reverse stock split. U.S. Holders of shares of Mast common stock acquired on different dates and at different prices should consult their tax advisors regarding the allocation of the tax basis and holding period of such shares.

Cash in Lieu of Fractional Shares

A U.S. Holder of Mast common stock that receives cash in lieu of a fractional share of Mast common stock pursuant to the reverse stock split should recognize capital gain or loss in an amount equal to the difference between the amount of cash received and the U.S. Holder s tax basis in the shares of Mast common stock surrendered that is allocated to such fractional share of Mast common stock. Such capital gain or loss should be long-term capital gain or loss if the U.S. Holder s holding period for Mast common stock surrendered exceeded one year at the effective time of the reverse stock split.

Information Reporting and Backup Withholding

A U.S. Holder of Mast common stock may be subject to information reporting and backup withholding on cash paid in lieu of fractional shares in connection with the reverse stock split. A U.S. Holder of Mast common stock will be subject to backup withholding if such holder is not otherwise exempt and such holder does not provide its taxpayer identification number in the manner required or otherwise fails to comply with applicable backup withholding tax rules.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be refunded or allowed as a credit against a U.S. Holder of Mast common stock s federal income tax liability, if any, provided the required information is timely furnished to the IRS. U.S. Holders of Mast common stock should consult their tax advisors regarding their qualification for an exemption from backup withholding and the procedures for obtaining such an exemption.

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Required Vote; Recommendation of Board of Directors

The affirmative vote of holders of a majority of the shares of Mast common stock having voting power outstanding on the record date for the Mast special meeting is required to approve the amendment and restatement of the amended and restated certificate of incorporation of Mast effecting a 1-for-[ ] reverse stock split of Mast common stock. **Each of Proposal Nos. 1, 2 and 3 are conditioned upon each other. Therefore, the merger cannot be consummated without the approval of Proposal Nos. 1, 2 and 3.**

THE MAST BOARD UNANIMOUSLY RECOMMENDS THAT MAST STOCKHOLDERS VOTE FOR MAST PROPOSAL NO. 2 TO APPROVE THE AMENDMENT AND RESTATEMENT OF THE AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF MAST EFFECTING THE 1-FOR-[ ] REVERSE STOCK SPLIT.

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Mast Proposal No. 3: Approval of Name Change

At the Mast special meeting, holders of Mast stock will be asked to approve the amendment and restatement of the amended and restated certificate of incorporation of Mast to change the name of the corporation from Mast Therapeutics, Inc. to Savara Inc. by filing the amendment and restatement of the amended and restated certificate of incorporation at the effective time of the merger. The primary reason for the corporate name change is that management believes this will allow for brand recognition of Savara product candidates and product candidate pipeline following the consummation of the merger. Mast management believes that the current name will no longer accurately reflect the business of Mast and the mission of Mast subsequent to the consummation of the merger.

Required Vote; Recommendation of Board of Directors

The affirmative vote of holders of a majority of the shares of Mast common stock having voting power outstanding on the record date for the Mast special meeting is required to approve the amendment and restatement of the amended and restated certificate of incorporation to change the name Mast Therapeutics, Inc. to Savara Inc. **Each of Proposal Nos. 1, 2 and 3 are conditioned upon each other. Therefore, the merger cannot be consummated without the approval of Proposal Nos. 1, 2 and 3.**

THE MAST BOARD UNANIMOUSLY RECOMMENDS THAT MAST STOCKHOLDERS VOTE FOR MAST PROPOSAL NO. 3 TO APPROVE THE NAME CHANGE.

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Mast Proposal No. 4: Advisory Non-Binding Vote on Merger-Related Executive Compensation Arrangements

Section 14A of the Exchange Act, which was enacted as part of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, requires that Mast provide stockholders with the opportunity to vote to approve, on a non-binding advisory vote basis, the payment of certain compensation that will or may become payable by Mast to its named executive officers in connection with the merger, as disclosed in the section titled The Merger Interests of the Mast Directors and Executive Officers in the Merger, beginning on page [ ] of this proxy statement/prospectus/information statement.

Upon the consummation of the merger, the combined company expects to terminate each Mast named executive officer without cause. Therefore, Mast is asking stockholders to indicate their approval of the compensation that will or may become payable by Mast to its named executive officers in connection with the merger and the associated termination of the named executive officers without cause upon the consummation of the merger. These payments are set forth in the section titled The Merger Interests of the Mast Directors and Executive Officers in the Merger, beginning on page [ ] of this proxy statement/prospectus/information statement, and the accompanying footnotes. In general, the severance agreements, equity awards and other arrangements pursuant to which these compensation payments may be made have previously formed a part of Mast s overall compensation program for its named executive officers and previously have been disclosed to stockholders as part of Mast s annual proxy statements or its other reports filed with the Securities and Exchange Commission. These severance agreements, equity awards and other arrangements were adopted and approved by the Mast Board, upon recommendation of its compensation committee, which is composed solely of non-employee directors, and are believed to be reasonable and in line with marketplace norms.

Accordingly, we are seeking approval of the following resolution at the special meeting:

RESOLVED, that the stockholders of Mast Therapeutics, Inc. approve, on a nonbinding, advisory basis, the compensation that will or may become payable by Mast to its named executive officers that is based on or otherwise relates to the merger as disclosed pursuant to Item 402(t) of Regulation S-K in the section titled The Merger Interests of the Mast Directors and Executive Officers in the Merger.

Stockholders of Mast should note that this proposal is not a condition to completion of the merger, and as an advisory vote, the result will not be binding on Mast, its board of directors or the named executive officers. Further, the underlying severance agreements, equity awards and other arrangements are contractual in nature and not, by their terms, subject to stockholder approval. Accordingly, regardless of the outcome of the advisory vote, if the merger is consummated and Mast s named executive officers are terminated in connection with the merger, the named executive officers will be eligible to receive the compensation that is based on or otherwise relates to the merger in accordance with the terms and conditions applicable to the underlying severance agreements, equity awards and other arrangements Mast entered into with these named executive officers.

The affirmative vote of the holders of a majority of the shares of Mast common stock having voting power present in person or represented by proxy at the Mast special meeting is required to approve the non-binding advisory vote on merger-related executive compensation arrangements.

THE MAST BOARD UNANIMOUSLY RECOMMENDS THAT THE MAST STOCKHOLDERS VOTE FOR MAST PROPOSAL NO. 4 TO APPROVE, ON A NON-BINDING ADVISORY VOTE BASIS, COMPENSATION THAT WILL OR MAY BECOME PAYABLE BY MAST TO ITS NAMED EXECUTIVE OFFICERS IN CONNECTION WITH THE MERGER.

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Mast Proposal No. 5: Approval of Possible Adjournment of the Mast Special Meeting

If Mast fails to receive a sufficient number of votes to approve Mast Proposal Nos. 1, 2, 3 and 4, Mast may propose to adjourn the Mast special meeting, for a period of not more than 15 days, for the purpose of soliciting additional proxies to approve Mast Proposal Nos. 1, 2, 3 and 4. Mast currently does not intend to propose adjournment at the Mast special meeting if there are sufficient votes to approve Mast Proposal Nos. 1, 2, 3 and 4.

The affirmative vote of the holders of a majority of the shares of Mast common stock having voting power present in person or represented by proxy at the Mast special meeting is required to approve the adjournment of the Mast special meeting for the purpose of soliciting additional proxies to approve Mast Proposal Nos. 1, 2, 3 and 4.

THE MAST BOARD UNANIMOUSLY RECOMMENDS THAT THE MAST STOCKHOLDERS VOTE FOR MAST PROPOSAL NO. 5 TO ADJOURN THE SPECIAL MEETING, IF NECESSARY, TO SOLICIT ADDITIONAL PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR OF MAST PROPOSAL NOS. 1, 2, 3 AND 4. EACH OF PROPOSAL NOS. 1, 2 AND 3 ARE CONDITIONED UPON EACH OTHER. THEREFORE, THE MERGER CANNOT BE CONSUMMATED WITHOUT THE APPROVAL OF PROPOSAL NOS. 1, 2 AND 3.

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MAST BUSINESS

Mast is a biopharmaceutical company developing clinical-stage therapies for serious or life-threatening diseases with significant unmet needs. Mast s lead product candidate, AIR001, a sodium nitrite solution for inhalation via nebulization, has demonstrated positive hemodynamic benefits in patients with heart failure with preserved ejection fraction, or HFpEF, and pulmonary hypertension, and currently is in clinical development for HFpEF. Three Phase 2 studies of AIR001 in patients with HFpEF are being conducted as investigator-sponsored studies by leading research institutions. Positive interim results from one of those studies were published in November 2016. Results from another of the studies, a 100-patient, randomized, double-blind, placebo-controlled crossover study being conducted by the Heart Failure Clinical Research Network, are expected in the first quarter of 2018.

Mast s second product candidate, vepoloxamer (also known as MST-188), is currently in a nonclinical study that is being funded by a grant from the National Institutes of Health to evaluate vepoloxamer s potential therapeutic use in ischemic stroke. Vepoloxamer was previously in clinical development in sickle cell disease and heart failure, but following negative top-line results of the Phase 3 study in sickle cell disease known as EPIC in September 2016, Mast determined to discontinue the clinical development of vepoloxamer and wind down all of the clinical studies. Vepoloxamer has demonstrated multiple pharmacologic effects that may provide clinical benefit in a wide range of diseases and conditions typically characterized by impaired microvascular blood flow and/or damaged cell membranes, but Mast has limited its development of vepoloxamer to the grant-funded nonclinical study in ischemic stroke while it explores opportunities to monetize its vepoloxamer-related assets in order to focus its resources on AIR001 s development.

Mast has devoted substantially all of its resources to research and development, or R&D, and to acquisition of its product candidates. Mast has not yet marketed or sold any products or generated any significant revenue and Mast has incurred significant annual operating losses since inception.

AIR001 Phase 2 Product Candidate for the Treatment of HFpEF

AIR001 is a sodium nitrite solution for inhalation via nebulization. Nitrite is a direct vasodilator and can be recycled in vivo to form nitric oxide (NO) independent of the classical NO synthase (NOS) pathway. Nitrite-mediated NO formation has several beneficial effects, including dilation of blood vessels and reduction of inflammation and undesirable cell growth. Generation of NO from sodium nitrite is not dependent upon endothelial function and is enhanced in the setting of tissue hypoxia and acidosis, conditions in which NOS activity typically is depressed. In experimental models, nitrite use has demonstrated improved remodeling both in the pulmonary vasculature and right ventricle. Hemodynamic effects include venodilation with reductions in right atrial pressures, pulmonary and systemic vasodilation with reductions in pulmonary vascular resistance and left atrial pressures, and improved cardiac relaxation. In addition, nonclinical studies have demonstrated that nitrite can stimulate mitochondrial biogenesis and mitochondrial fusion and decrease mitochondrial oxygen consumption through a mechanism distinct from that of NO, which may have utility in treating heart failure.

Mast obtained the AIR001 program through its acquisition of Aires Pharmaceuticals, Inc. in February 2014. Prior to the acquisition, AIR001 had been tested in more than 120 healthy volunteers and patients with various forms of pulmonary hypertension in three Phase 1 studies and one Phase 2 study and was generally well-tolerated. While the Phase 2 study in patients with pulmonary arterial hypertension, known as Study CS05, was prematurely terminated due to Aires capital constraints prior to the acquisition, data from the 29 patients who enrolled in the study were positive, showing a trend towards improvements in hemodynamic parameters and change in exercise capacity from baseline, and AIR001 was generally well-tolerated, with no drug-related serious adverse events. In particular, levels of methemoglobin, which diminish oxygen carrying capacity, remained normal (< 1.5%), distinguishing AIR001 from

safety concerns associated with sodium nitrite injection, a commercially-available product for the treatment of acute cyanide poisoning that contains a black box warning for life-threatening hypotension and methemoglobin formation.

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Clinical Development in HFpEF

Mast has supported or currently is supporting four investigator-sponsored Phase 2 studies of AIR001 in patients with HFpEF.

Completed Phase 2 Study of AIR001 in HFpEF. In February 2016, Mast reported positive top-line results from a randomized, double-blind, placebo-controlled Phase 2a study of AIR001 in 30 patients with HFpEF referred to the catheterization laboratory for invasive exercise stress testing. Detailed results from the study were published in *Circulation Research* in July 2016 in an article entitled, Inhaled Sodium Nitrite Improves Rest and Exercise Hemodynamics in Heart Failure With Preserved Ejection Fraction. In the study, AIR001 showed statistically significant improvement for the pre-specified primary endpoint: change in pulmonary capillary wedge pressure (PCWP) at 20 Watts exercise after drug treatment relative to PCWP at 20 Watts exercise in the initial assessment prior to drug treatment, compared to placebo-treated patients. AIR001 also significantly lowered right atrial pressure and significantly improved pulmonary artery compliance. Study data show that nebulized AIR001 attenuates the hemodynamic derangements of cardiac failure that occur during exercise in HFpEF patients. AIR001 was generally well-tolerated, with no drug-related serious adverse events.

Phase 2 study of AIR001 in subjects with PH-HFpEF. This open-label study is evaluating the effect of AIR001 in a dose escalation manner on change in pulmonary vascular resistance in approximately 50 patients with pulmonary hypertension (PH), approximately 20 of whom are diagnosed with PH associated with HFpEF and undergo right heart catherization. Positive interim results from this study, including data on 10 of the 20 PH-HFpEF patients to be enrolled, were published in the *Journal of Clinical Investigation* in November 2016. The interim results on 36 subjects show that AIR001 significantly lowered pulmonary, right atrial, and pulmonary capillary wedge pressures, with a substantial increase in pulmonary artery compliance, which was most pronounced in patients with PH-HFpEF. AIR001 was generally well-tolerated; no significant safety concerns were identified. In addition, there were no significant decreases in peripheral oxygen saturation nor increases in methemoglobin levels above the stopping criteria of 5%. Patient enrollment is ongoing.

Phase 2 study known as the Inorganic Nitrite Delivery to Improve Exercise Capacity in HFpEF (INDIE-HFpEF) study. This randomized, double-blind, placebo-controlled crossover study in approximately 100 patients with HFpEF is being conducted by the Heart Failure Clinical Research Network (known as the HFN) with significant support from a grant awarded by the National Heart, Lung, and Blood Institute, part of the NIH. The study is being conducted at approximately 20 clinical centers in the U.S. that are part of the HFN and is evaluating the effect of AIR001 on peak exercise capacity. Results are expected in the first quarter of 2018.

Phase 2 study of AIR001 known as the Inorganic Nitrite to Amplify the Benefits and Tolerability of Exercise Training (INABLE-TRAINING) study. This randomized, blinded, placebo-controlled, two-arm, parallel-group study in approximately 68 patients with HFpEF is evaluating AIR001 s potential to improve the clinical responses to exercise training in individuals with HFpEF. Patient enrollment is ongoing.

Mast believes the datasets from these Phase 2 studies, if supportive of further development of AIR001 in HFpEF patients, along with the completed toxicology studies and human safety data from prior AIR001 clinical studies, will be adequate for an end of Phase 2 meeting with the FDA to enter into discussions regarding a Phase 3 program in HFpEF.

Manufacturing

Mast does not have, and has not made plans to establish, its own manufacturing facilities. Mast meets its requirements for nonclinical and clinical trial material by establishing relationships with third-party manufacturers and other service providers to perform these services for it.

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In the case of AIR001 clinical trial material, Mast has single-source, third-party suppliers of API and finished drug product and there are a limited number of manufacturers with the technical capabilities and desire to produce AIR001. In addition, AIR001 is administered via nebulization and the proprietary nebulizer device currently validated for use in clinical studies of AIR001 is manufactured and supplied by a single third-party.

Following the negative results from the Phase 3 clinical study in sickle cell disease, Mast terminated its vepoloxamer-related manufacturing agreements and currently does not have any manufacturing capabilities for vepoloxamer.

Intellectual Property

To protect its proprietary compounds, Mast has implemented and will continue to pursue a multi-faceted approach that relies on a combination of patent protection, proprietary know-how, trade secrets, and data and market exclusivity. Mast seeks to establish and protect its proprietary rights through confidentiality, licensing and other agreements, including those with its contract manufacturers and drug inhalation delivery system supplier.

In the case of AIR001, Mast has filed for patent protection covering various methods of therapeutic use of inorganic nitrite, including the use of inhaled inorganic nitrite for treating HFpEF. Mast may also seek to obtain licenses to third party patents and other rights to the extent it determines they relate to potential therapeutic uses of AIR001. Additionally, Mast believes there is potential to establish exclusivity around the combination of AIR001 and its inhalation delivery system.

Mast is aware of a substantial number of patents issued and patent applications filed in its technical areas or fields, and Mast may want or determine that it needs to obtain licenses to patents or other rights owned by third parties. There is a risk that third parties may allege that they have patent rights encompassing Mast s products or methods and no assurance can be given that patents do not exist, have not been filed, or could not be filed or issued, that contain claims covering its product candidates or methods.

Competition

The industries in which Mast operates (biopharmaceutical, specialty pharmaceutical, biotechnology and pharmaceutical) are highly competitive and subject to rapid and significant change. Mast may not be able to compete successfully against organizations with competitive products, particularly large pharmaceutical companies. Many of its potential competitors have greater clinical, regulatory, manufacturing, marketing, distribution, compliance and financial resources and experience than Mast.

Government Regulation

Governmental authorities in the U.S. and other countries extensively regulate the testing, manufacturing, labeling and packaging, storage, recordkeeping, advertising, promotion, import, export, marketing and distribution, among other things, of pharmaceutical products. In the U.S., the FDA, under the Federal Food, Drug and Cosmetic Act, or FDCA, and other federal statutes and regulations, subjects pharmaceutical products to rigorous review. If Mast does not comply with applicable requirements, Mast may be fined, the government may refuse to approve its marketing applications or allow us to manufacture or market its products, and Mast may be criminally prosecuted.

Mast and its third-party manufacturers, distributors and CROs may also be subject to regulations under other federal, state, and local laws, including the Occupational Safety and Health Act, the Environmental Protection Act, the Clean Air Act, the Health Insurance Portability and Accountability Act, privacy laws and import, export and customs

regulations, as well as the laws and regulations of other countries.

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FDA Approval Process

To obtain approval of a new drug product from the FDA, Mast must, among other requirements, submit data supporting its safety and efficacy, as well as detailed information on the manufacture and composition of the drug and proposed product labeling. The testing and collection of data and the preparation of necessary applications are expensive and time-consuming. The FDA may not act quickly or favorably in reviewing these applications, and Mast may encounter significant difficulties or costs in its efforts to obtain FDA approvals that could delay or preclude us from marketing Mast s product candidates, including AIR001 and vepoloxamer.

The process required by the FDA before a new drug may be marketed in the U.S. generally involves the following:

- completion of nonclinical laboratory and animal testing performed in compliance with FDA regulations;
- submission of an investigational new drug application, or IND, which must become effective before human clinical trials may begin and must be updated annually;
- performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the product candidate for its intended use;
- submission of an NDA after completion of pivotal clinical trials;
- a determination by the FDA within 60 days of its receipt of the NDA to file the NDA for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facilities at which the API and finished drug product are produced and tested to assess compliance with current good manufacturing practices, or cGMP;
- possible inspection of selected clinical sites to confirm compliance with good clinical practices, or GCP, requirements and data integrity; and
- FDA review and approval of the NDA prior to any commercial marketing or sale of the drug product in the U.S.

Clinical studies are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety, and the efficacy criteria to be evaluated. A protocol for each clinical study and any subsequent protocol amendments must be submitted to the FDA as part of the IND.

The clinical investigation of an investigational new drug is generally divided into three phases that typically are conducted sequentially, but may overlap. The three phases are as follows:

Phase 1. Phase 1 includes initial clinical studies introducing an investigational new drug into humans, and may be conducted in patients or normal volunteer subjects. These studies are designed to determine the metabolism and pharmacologic actions of the drug in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness. The number of participants included in Phase 1 studies is generally in the range of 20 to 80.

Phase 2. Phase 2 includes the controlled clinical studies conducted to evaluate the effectiveness of the drug for a particular indication or indications in patients with the disease or condition under study and to determine the common short-term side effects and risks associated with the drug. Phase 2 studies are typically well controlled, closely monitored, and conducted in a relatively small number of patients, usually involving no more than several hundred subjects.

Phase 3. Phase 3 studies are typically expanded trials, which may be controlled or uncontrolled (which refers to a study that does not have a control, or comparison, group). They are performed after preliminary evidence suggesting effectiveness of the drug has been obtained, and are intended to gather additional information about the effectiveness and safety that is needed to evaluate the overall benefit-

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risk relationship of the drug and to provide an adequate basis for physician labeling and product approval. Phase 3 studies usually are conducted at geographically dispersed clinical study sites and include from several hundred to several thousand subjects.

A clinical study may combine the elements of more than one phase and the FDA generally requires two or more Phase 3 studies to support approval of a product candidate. A company s designation of a clinical study as being of a particular phase is not necessarily indicative that the study will be sufficient to satisfy the FDA requirements of that phase because this determination cannot be made until the protocol and data have been submitted to and reviewed by the FDA. In addition, a clinical study may contain elements of more than one phase notwithstanding the designation of the study as being of a particular phase.

A pivotal study is a clinical study that is believed to satisfy FDA requirements for the evaluation of a product candidate s safety and efficacy such that it can be used, alone or with other pivotal or non-pivotal studies, to justify regulatory approval. Generally, pivotal studies are Phase 3 studies, but they may be Phase 2 studies if the study design provides a well-controlled and reliable assessment of clinical benefit, particularly in an area of unmet medical need.

Clinical trials must be conducted in accordance with the FDA s good clinical practices, or GCP, requirements. The FDA may order the temporary or permanent discontinuation of a clinical study at any time or impose other sanctions if it believes that the clinical study is not being conducted in accordance with FDA requirements or that the participants are being exposed to an unacceptable health risk. An institutional review board, or IRB, generally must approve the clinical trial design and process for obtaining patient informed consent at study sites that the IRB oversees and also may halt a study, either temporarily or permanently, for failure to comply with the IRB s requirements, or may impose other conditions. Additionally, some clinical studies are overseen by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board or committee. This group recommends whether or not a trial may continue based on access to certain data from the study at designated check points.

As a product candidate moves through the clinical testing phases, manufacturing processes are further defined, refined, controlled and validated. The level of control and validation required by the FDA increases as clinical studies progress. Mast and the third-party manufacturers on which it relies for the manufacture of Mast s product candidates and their respective components (including API) are subject to requirements that drugs be manufactured, packaged and labeled in conformity with cGMP. To comply with cGMP requirements, manufacturers must continue to spend time, money and effort to meet requirements relating to personnel, facilities, equipment, production and process, labeling and packaging, quality control, recordkeeping and other requirements.

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, detailed information on the product candidate is submitted to the FDA in the form of an NDA requesting approval to market the drug for one or more indications, together with payment of a significant user fee, unless waived. An NDA includes all relevant data available from pertinent nonclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information on the chemistry, manufacture, controls (CMC) and proposed labeling, among other things. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and efficacy of the product candidate for its intended use to the satisfaction of the FDA. In addition, under the Pediatric Research Equity Act, or PREA, an NDA or supplement to an NDA must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any drug for an indication for which orphan designation has been granted. However, if only one indication for a product has orphan drug designation, a pediatric assessment may still be required for any applications to market that same product for the non-orphan indication(s).

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The FDA reviews all NDAs submitted to ensure that they are sufficiently complete for substantive review before it accepts them for filing. It may request additional information rather than accept an NDA for filing. In this event, the application must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. The FDA has 60 days after submission of an NDA to conduct an initial review to determine whether it is sufficient to accept for filing.

If an NDA submission is accepted for filing, the FDA begins an in-depth review of the NDA. Under the Prescription Drug User Fee Act, or PDUFA, the FDA sets a goal date by which it plans to complete its review. For a standard review, this goal date typically is 12 months from the date of submission of the NDA application. If the NDA application relates to an unmet medical need in a serious or life-threatening indication and is designated for priority review, the FDA s goal date typically is eight (8) months from the date of NDA submission. However, PDUFA goal dates are not legal mandates and FDA response often occurs several months beyond the original PDUFA goal date. Further, the review process and the target response date under PDUFA may be extended if the FDA requests, or the NDA sponsor otherwise provides, additional information or clarification regarding information already provided in the NDA. The NDA review process can, accordingly, be very lengthy. During its review of an NDA, the FDA may refer the application to an advisory committee for review, evaluation and recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it typically follows such recommendations. Data from clinical studies are not always conclusive and the FDA and/or any advisory committee it appoints may interpret data differently than the NDA sponsor.

After the FDA evaluates the NDA and inspects manufacturing facilities where the drug product and/or its API will be produced, it will either approve commercial marketing of the drug product with prescribing information for specific indications or issue a complete response letter indicating that the application is not ready for approval and stating the conditions that must be met in order to secure approval of the NDA. If the complete response letter requires additional data and the applicant subsequently submits that data, the FDA nevertheless may ultimately decide that the NDA does not satisfy its criteria for approval. The FDA could also approve the NDA with a Risk Evaluation and Mitigation Strategy, or REMS, which could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling, development of adequate controls and specifications, or a commitment to conduct post-marketing testing. Such post-marketing testing may include Phase 4 clinical studies and surveillance to further assess and monitor the product s safety and efficacy after approval. Regulatory approval of products for serious or life-threatening indications may require that participants in clinical studies be followed for long periods to determine the overall survival benefit of the drug.

If the FDA approves any of Mast s product candidates, Mast will be required to comply with a number of post-approval regulatory requirements. Mast would be required to report, among other things, certain adverse reactions and production problems to the FDA, provide updated safety and efficacy information and comply with requirements concerning advertising and promotional labeling for any of Mast s products. Also, quality control and manufacturing procedures must continue to conform to cGMP after approval, and the FDA periodically inspects manufacturing facilities to assess compliance with cGMP, which imposes extensive procedural, substantive and record keeping requirements. If Mast seeks to make certain changes to an approved product, such as certain manufacturing changes, Mast will need FDA review and approval before the change can be implemented. For example, if Mast changes the manufacturer of a product or its API, the FDA may require stability or other data from the new manufacturer, which data will take time and is costly to generate, and the delay associated with generating this data may cause interruptions in Mast s ability to meet commercial demand, if any. While physicians may use products for indications that have not been approved by the FDA, Mast may not label or promote the product for an indication that has not been approved. Securing FDA approval for new indications is similar to the process for approval of the original indication and requires, among other things, submitting data from adequate and well-controlled studies that

demonstrate the product s safety and efficacy in the new indication. Even if such studies are conducted, the FDA may not approve any change in a timely fashion, or at all.

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Mast relies on third parties for the manufacture of Mast s clinical trial material and Mast expects to rely on third-party manufacturers to produce commercial quantities of Mast s drugs, should they receive regulatory approval in the future. Future FDA, state and/or foreign governmental agency inspections may identify compliance issues at these third-party facilities that may disrupt production or distribution or require substantial resources to correct. In addition, discovery of previously unknown problems with a product or the failure to comply with applicable requirements may result in restrictions on a product, manufacturer or holder of an approved NDA, including withdrawal or recall of the product from the market or other voluntary, FDA-initiated or judicial action that could delay or prohibit further marketing. Newly discovered or developed safety or efficacy data may require changes to a product s approved labeling, including the addition of new warnings and contraindications, and also may require the implementation of other risk management measures. Many of the foregoing could limit the commercial value of a product or require us to commit substantial additional resources in connection with the approval of an investigational drug. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA s policies may change, which could delay or prevent regulatory approval of Mast s products under development.

Expedited Review Programs

Investigational drugs intended to treat serious or life-threatening conditions with unmet medical needs may be eligible for certain programs intended to expedite or facilitate the process for FDA review, such as the fast track and priority review designations. Fast track and priority review designations do not change the standards for FDA approval but may expedite the approval process.

Investigational drugs are eligible for fast track designation if they are intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. Fast track designation applies to the combination of the drug and the specific indication for which it is being studied. For a drug with fast track designation, the FDA may consider a rolling review of the NDA, meaning it may agree to review sections of the NDA on a rolling basis before the complete application is submitted, which could expedite the FDA s review of the NDA. Fast track designation, however, does not guarantee that the FDA will agree to a rolling review of the NDA. An investigational drug is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an NDA for a drug product candidate designated for priority review in an effort to facilitate the review.

Pharmaceutical Pricing and Reimbursement

Sales of Mast s products, if approved, will depend, in part, on the extent to which the costs of Mast s products will be covered by third-party payers, such as government healthcare programs, private health insurers, managed healthcare providers, and other organizations. These third-party payers are increasingly challenging drug prices and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. If these third-party payers do not consider Mast s products to be cost-effective compared to other therapies, they may not cover Mast s products after approval as a benefit under their plans or, even if they do, the level of payment may not be sufficient to allow us to sell Mast s products on a profitable basis. In the case of products administered in an inpatient hospital setting, a level of payment that is inadequate to cover the cost to hospitals of providing and administering Mast s products to patients, could delay acceptance of or limit Mast s ability to penetrate the markets for Mast s products.

Significant uncertainty exists as to the reimbursement status for newly approved drug products, including coding, coverage and payment. Sales of any products for which Mast obtains marketing approval will depend in part on coverage and adequate payment from third-party payers. There is no uniform policy requirement for coverage and

reimbursement for drug products among third-party payers in the United States, therefore coverage and reimbursement for drug products can differ significantly from payer to payer. The coverage determination

process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of Mast s products to each payer separately, with no assurance that coverage and adequate payment will be applied consistently or obtained. The process for determining whether a payer will cover and how much it will reimburse a product may be separate from the process of seeking approval of the product or for setting the price of the product. Even if reimbursement is provided, market acceptance of Mast s products may be adversely affected if the amount of payment for Mast s products proves to be unprofitable for healthcare providers or less profitable than alternative treatments or if administrative burdens make Mast s products less desirable to use. Third-party payer reimbursement to providers of Mast s products, if approved, may be subject to a bundled payment that also includes the procedure of administering Mast s products. To the extent there is no separate payment for Mast s product(s), there may be further uncertainty as to the adequacy of reimbursement amounts.

Additionally, the containment of healthcare costs has become a priority of federal and state governments and the prices of drug products have been a focus in this effort. For example, there have been several recent U.S. Congressional inquiries and proposed bills designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. Mast expects that federal, state and local governments in the U.S. will continue to consider legislation directed at lowering the total cost of healthcare. In addition, in certain foreign markets, the pricing of drug products is subject to government control and reimbursement may in some cases be unavailable or insufficient.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, collectively referred to as the ACA, enacted in March 2010, has had and is expected to continue to have a significant impact on the healthcare industry. The ACA, among other things, imposes a significant annual fee on certain companies that manufacture or import branded prescription drug products. The ACA also increased the Medicaid rebate rate and the volume of rebated drugs has been expanded to include beneficiaries in Medicaid managed care organizations. The ACA also expanded the 340B drug discount program (excluding orphan drugs), included a 50% discount on brand name drugs for Medicare Part D participants in the coverage gap, and revised the definition of average manufacturer price for reporting purposes, which could increase the amount of the Medicaid drug rebates paid to states. It also contains substantial provisions intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against healthcare fraud and abuse, add new transparency requirements for the healthcare industry, impose new taxes and fees on pharmaceutical manufacturers, and impose additional health policy reforms, any or all of which may affect Mast s business. Since its enactment there have been judicial and Congressional challenges to certain aspects of the ACA, and Mast expects there will be additional challenges and amendments to the ACA in the future. Certain provisions of the ACA are not yet, or have only recently become, effective, and others have been temporarily suspended, but the ACA is likely to continue the downward pressure on pharmaceutical pricing, and may also increase Mast s regulatory burdens and operating costs.

Other legislative changes have also been proposed and adopted since the ACA was enacted. For example, the Budget Control Act of 2011 resulted in aggregate reductions in Medicare payments to providers of up to 2% per fiscal year, which went into effect in 2013 and, following passage of the Bipartisan Budget Act of 2015, will stay in effect through 2025 unless additional Congressional action is taken. Additionally, the American Taxpayer Relief Act of 2012, among other things, reduced Medicare payments to several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding.

It is uncertain whether and how future legislation, whether domestic or abroad, could affect prospects for Mast s product candidates or what actions federal, state, or commercial payers for healthcare treatment and services may take in response to any such healthcare reform proposals or legislation. Adoption of price controls and cost-containment

measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures reforms may prevent or limit Mast s ability to generate revenue, attain profitability or commercialize Mast s product candidates.

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Other Healthcare Laws and Compliance Requirements

In addition to FDA requirements, several other types of state and federal laws apply and will apply to Mast s operations. These laws include, among others, healthcare information and data privacy protection laws, transparency laws, and fraud and abuse laws, such as anti-kickback and false claims laws.

The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item, good, facility or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exceptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor.

Federal false claims laws and civil monetary penalties laws prohibit, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to have a false claim paid. Pharmaceutical and other healthcare companies have been prosecuted under these laws for, among other things, allegedly promoting their products for uses for which they were not approved and causing the submission of claims for payment for such use under federal healthcare programs. In addition, the Health Insurance Portability and Accountability Act of 1996, or HIPAA, prohibits persons and entities from knowingly and willfully executing a scheme to defraud any health care benefit program, including private payers, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for health care benefits, items or services.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act and its implementing regulations, also imposes obligations, including mandatory contractual terms, on certain types of individuals and entities, with respect to safeguarding the privacy, security and transmission of individually identifiable health information.

The federal transparency requirements under the ACA, requires certain manufacturers of drug products, medical devices, biologics and medical supplies to annually report to the Department of Health and Human Services information related to payments and other transfers of value to physicians and teaching hospitals and physician ownership and investment interests. Compliance with such reporting requirements may be costly.

The majority of states also have statutes or regulations similar to the aforementioned federal anti-kickback and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payer. Mast may be subject to state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts. In addition, Mast may be subject to reporting requirements under state transparency laws, as well as state laws that require pharmaceutical companies to comply with the industry s voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government that otherwise restricts certain payments that may be made to healthcare providers and entities.

Government Regulation Outside the U.S.

In addition to regulations in the U.S., Mast may be subject to a variety of regulations in foreign jurisdictions that govern, among other things, clinical studies and any commercial sales and distribution of Mast s products.

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Whether or not Mast obtains FDA approval for a product candidate, it must obtain the requisite approvals from regulatory authorities in foreign jurisdictions prior to the commencement of clinical studies or marketing and sale of the product in those countries. The foreign regulatory approval process includes all of the risks associated with the FDA approval described above. Some foreign jurisdictions have a drug product approval process similar to that in the U.S., which requires the submission of a clinical trial application much like the IND prior to the commencement of clinical studies. In Europe, for example, a clinical trial application, or CTA, must be submitted to each country s national health authority and an independent ethics committee, much like the FDA and IRB, respectively. Once the CTA is approved in accordance with a country s requirements, clinical trial development may proceed.

To obtain regulatory approval of a product candidate under European Union regulatory systems, Mast would be required to submit a Marketing Authorisation Application, which is similar to the NDA, except that, among other things, there are country-specific document requirements. For countries outside of the European Union, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical studies, product approval, pricing and reimbursement vary from country to country. In addition, regulatory approval of prices is required in most countries other than the U.S. Mast faces the risk that the resulting prices would be insufficient to generate an acceptable return to the company or any of its future partners. If Mast fails to comply with applicable foreign regulatory requirements, it may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Employees

As of February 2, 2017, Mast has 10 employees, seven of which are full-time and three of which are part-time. Mast s employees are not unionized and Mast believes that its relationship with its employees is good.

Formation

Mast was incorporated in Delaware in December 1995. In October 2000, Mast merged its wholly-owned subsidiary, Biokeys Acquisition Corp., with and into Biokeys, Inc. and changed the company s name to Biokeys Pharmaceuticals, Inc. In May 2003, the company merged Biokeys, Inc., a wholly-owned subsidiary, with and into the company and changed its name to ADVENTRX Pharmaceuticals, Inc. In March 2013, the company merged Mast Therapeutics, Inc., a wholly-owned subsidiary, with and into the company and changed its name to Mast Therapeutics, Inc.

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SAVARA BUSINESS

Overview

Savara is a clinical-stage specialty pharmaceutical company focused on the development and commercialization of novel therapies for the treatment of serious or life-threatening rare respiratory diseases. Savara s pipeline comprises AeroVanc, a Phase 3 ready inhaled vancomycin, and Molgradex, a Phase 2/3 stage inhaled granulocyte-macrophage colony-stimulating factor, or GM-CSF. Savara s strategy involves expanding its pipeline of best-in-class products through indication expansion, strategic development partnerships and product acquisitions, with the goal of becoming a leading company in its field. Savara s management team has significant experience in orphan drug development and pulmonary medicine, in identifying unmet needs, creating and acquiring new product candidates, and effectively advancing them to approvals and commercialization.

AeroVanc, an inhaled formulation of vancomycin, is being developed for the treatment of persistent methicillin-resistant *Staphylococcus aureus*, or MRSA, lung infection in cystic fibrosis, or CF, patients. CF is a genetic disease that involves sticky mucus buildup in the lungs, persistent lung infections and permanent and progressive respiratory disability. There are approximately 30,000 patients affected by CF in the United States, and MRSA infection has become increasingly common in these patients, with a prevalence of approximately 26 %. Persistent MRSA infection in CF patients is associated with increased use of intravenous, or IV, antibiotics, increased hospitalizations, a faster decline of lung function, as well as shortened life-expectancy. Due to the lung pathology associated with CF, persistent MRSA lung infection is difficult to eradicate or manage using oral or IV antibiotics, and there is no standard of care to manage this condition. Whereas inhaled antibiotics have become a cornerstone of treating the most prevalent chronic pathogen in CF patients, *Pseudomonas aeruginosa*, there are no approved inhaled antibiotics addressing MRSA lung infection. In a randomized, double-blind, placebo-controlled Phase 2 study in CF patients with persistent MRSA infection, AeroVanc reduced MRSA density in sputum, and showed encouraging trends of improvement in lung function, and respiratory symptoms, as well as prolongation of the time to use of other antibiotics, with best responses in subjects under 21 years of age. After receiving detailed guidance from the FDA, Savara has planned a pivotal Phase 3 study of AeroVanc that it anticipates starting in the third quarter of 2017.

Molgradex, an inhaled formulation of recombinant human GM-CSF, is being developed for the treatment of autoimmune pulmonary alveolar proteinosis, or PAP, a rare lung disease characterized by the build-up of lung surfactant in the alveoli, or air sacs, of the lungs. PAP is estimated to have a prevalence of approximately 2,500 patients in the United States. The disease process underlying PAP involves an autoimmune response against a naturally occurring protein, GM-CSF, suppressing the stimulating activity of GM-CSF on lung macrophages which function to clear excess surfactant from the alveoli. The best treatment currently available for PAP is a procedure called whole lung lavage, or WLL, which entails washing out the lungs bronchoscopically with saline, segment by segment, under general anesthesia. By its nature, WLL is an invasive and inconvenient procedure that requires hospitalization, and highly experienced physicians at specialist sites. Based on published investigator-sponsored treatment experience with inhaled GM-CSF, Savara believes Molgradex has the potential to replace the inactivated GM-CSF in PAP patients, and thereby to restore the surfactant clearing activity of the alveolar macrophages, and to become the treatment of choice for PAP. The company has completed a Phase 1 study in healthy volunteers, and is currently conducting a pivotal Phase 2/3 study in Europe and Japan, with top line results expected in the first quarter of 2018.

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Savara s pipeline of product candidates is illustrated in the figure below. In order to fully exploit the potential of its current pipeline, Savara is also pursuing indication expansions of its product candidates, with priority on the development of Molgradex in rare infectious lung diseases, where stimulation of the innate immune system has the potential to improve clinical outcomes. Savara is planning to advance the first such Molgradex indication expansion program into clinical Phase 2 development during 2017, and plans to disclose further information about the program throughout 2017.

Savara s product candidate pipeline

Savara currently owns exclusive worldwide rights to its product portfolio, except in Japan where rights to Molgradex have been licensed out to Nobelpharma Co., Ltd. AeroVanc has been granted Orphan Drug Designation and Qualified Infectious Disease Product, or QIDP, status for the treatment of persistent MRSA lung infection in CF patients in the United States, and Molgradex has been granted Orphan Drug Designation for the treatment of PAP in the United States and the European Union. The Orphan Drug Designation makes AeroVanc and Molgradex eligible for seven years of exclusivity from approval in the United States, and ten years of exclusivity in the European Union, whereas the QIDP status makes AeroVanc eligible for an additional five years of exclusivity in the United States.

AeroVanc Key Advantages Savara is currently preparing to initiate a Phase 3 clinical study of AeroVanc, to be conducted primarily in the United States and Canada. Savara has received detailed guidance from the FDA on the design of the study, and believes that the planned study is in accordance with the FDA s requirements for a sole pivotal study to be submitted for NDA approval. Savara anticipates initiating the study in the third quarter of 2017. Savara believes the results from its Phase 2 study, illustrated in part below, support the use of the same key endpoints and advancing the development of AeroVanc into a larger pivotal Phase 3 study. Notably, the Phase 2 study demonstrated a trend of clinically meaningful improvement in FEV_1, a common measure of lung function illustrated below on the left, as well as in time to use of another antibiotic for respiratory infection, illustrated below on the right. The planned primary efficacy endpoint of the Phase 3 study is change from baseline in FEV_1, and the primary analysis population will comprise patients under the age of 21, in line with experience from earlier clinical studies of inhaled anti-pseudomonal antibiotics in CF.

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Change from baseline in FEV_1 (left) and Time to use of other antibiotic for respiratory infection (right)

Per Protocol Population, 32 mg dose cohort, < 21 years of age, n = 16

Intent-to-treat Population, 32 mg dose cohort, < 21 years of age, n = 20

Savara believes that AeroVanc has a number of important characteristics that contribute to its clinical profile and clinical data to date, and that facilitate its regulatory approval and successful commercialization. Specifically, AeroVanc offers:

- Strong product foundation, applying a previously approved active substance and previously approved drug delivery technologies.
- High concentration of antibiotic is delivered directly to the lungs, the primary site of infection, which Savara believes can result in higher clinical efficacy and reduced systemic toxicity, as compared with oral or IV delivery of antibiotics.
- Capsule based powder inhaler providing a fast and convenient method of administration, which is very desirable in the CF population, who have a high treatment burden.
- Eligible for strong market protection via orphan drug status, QIDP status, a formulation patent, and an exclusive device supply agreement.

Molgradex Key Advantages Savara is currently conducting a Phase 2/3 clinical study, which is referred to as the IMPALA study, of Molgradex in Europe and Japan. Savara has received guidance from the European Medicines Agency, or EMA, on the design of the study, and believes the ongoing study is in accordance with the EMA s requirements for a sole pivotal study to be used in a marketing authorization application submission in the European Union. Savara anticipates reporting top-line results from the study in the first quarter of 2018. Savara is also in discussions with the FDA to receive guidance on the clinical study requirements for an NDA submission in the United States. Savara expects to have clarity on those requirements later this year. The options include expanding and modifying the ongoing IMPALA study as the sole pivotal study, or conducting a second pivotal study for US regulatory purposes.

Building upon the published investigator-sponsored treatment experience with inhaled GM-CSF, Savara believes Molgradex has the potential to become the treatment of choice for PAP. Molgradex has the following characteristics that Savara believes will contribute to its clinical profile, as well as facilitate its regulatory approval and successful commercialization. Specifically, Molgradex offers:

Strong product foundation, applying a previously approved active substance class and previously approved drug delivery technology.

GM-CSF is delivered directly to the lungs, the primary site of macrophage function deficiency, which Savara believes can result in high clinical efficacy with limited systemic adverse effects.

High efficiency nebulizer providing a fast and convenient method of administration, which is highly desirable for long-term treatment in a chronic disease, such as PAP.

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Eligible for strong market protection via orphan drug status, a proprietary cell bank used in the production of the drug substance, and an exclusive device supply agreement.

Strategy

Savara s goal is to become a leading specialty pharmaceutical company focused on treatments for rare respiratory diseases, through the development and commercialization of novel and best-in-class therapeutics to address unmet medical needs in its field. The key elements of Savara s strategy include:

Pursue AeroVanc and Molgradex indication expansion. While Savara s immediate priority is to obtain regulatory approvals in the primary indications described above, Savara believes both AeroVanc and Molgradex have the potential to be used for the treatment of several other diseases. In particular, Savara is exploring the use of Molgradex for the treatment of certain rare infectious lung diseases.

Expand the product pipeline through strategic product acquisitions. In addition to broadening its current pipeline through indication expansion, Savara s strategy includes expansion of its product pipeline through strategic partnerships and product acquisitions, such as its acquisition of the Molgradex program through the asset purchase of Serendex Pharmaceuticals in 2016. A key priority has been to exploit known chemical entities or classes in novel ways, such as delivery of drug directly into the lungs, for the treatment of serious or life-threatening lung diseases. While Savara has developed an internal core competence in inhaled drug development, the company is technology agnostic. Future pipeline expansion decisions will be based on the unmet medical need within a specific disease, the commercial opportunity, and the ability to rapidly develop and commercialize a product candidate.

Operate by outsourcing capital intensive operations. Savara plans to continue to pursue the development and manufacturing of its product candidates by outsourcing most clinical development and all manufacturing operations. Savara s business model has facilitated rapid development of its pipeline by using high quality specialist vendors and consultants in a capital efficient manner.

Establish its own sales and marketing capabilities to commercialize its products in the United States. Savara plans to commercialize its pipeline through its own specialty salesforce or strategic marketing partnerships in the United States. Outside the United States, Savara plans to commercialize its products in collaboration with partners that have the resources and infrastructure to successfully commercialize Savara s innovative therapeutics.

Overview of AeroVanc

Background on MRSA infection in cystic fibrosis

CF is a genetic disease characterized, in part, by the prevalence of thick, sticky mucus produced in the lung, frequent lung infections, and a resultant decline in pulmonary function. As the disease progresses, patients lungs are typically infected with bacteria that are difficult to eradicate. Inhaled antibiotics, including tobramycin (TOBI, Novartis AG), and aztreonam (Cayston, Gilead Sciences), have become a cornerstone of the treatment of the most common chronic pathogen, *Pseudomonas aeruginosa*, in order to control the infection and improve lung function and quality of life. In recent years, MRSA lung infection has become increasingly common in CF, with a prevalence of 26 % according to

the most recent (2015) data report of the Cystic Fibrosis Foundation. Importantly, persistent MRSA lung infection has been associated with worse clinical outcomes in CF, including a faster decline of lung function[1] and a shorter life expectancy.[2] The increasing prevalence and high clinical impact of MRSA infection in CF have created an unmet need for improved therapies to help address the condition. Considering the established practice of treating chronic *Pseudomonas aeruginosa* infection in CF using inhaled

1 Dasenbrook EC, Merlo CA, Diener-West M, et al. Persistent Methicillin-resistant *Staphylococcus aureus* and Rate of FEV1 Decline in Cystic Fibrosis. *Am J Respir Crit Care Med* 2008;178, 814-821.

2 Dasenbrook EC, Checkley W, Merlo CA, et al. Association Between Respiratory Tract Methicillin-Resistant *Staphylococcus aureus* and Survival in Cystic Fibrosis. *JAMA* 2010;303, 2386-2392

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antibiotics, all of which have limited activity against MRSA, it would be logical to attempt treatment of chronic MRSA infection with an inhaled antibiotic active against MRSA. Savara believes that AeroVanc is the first inhaled antibiotic being developed to specifically treat MRSA infection of the lungs.

Current MRSA treatment options in CF

Persistent MRSA lung infection in CF patients is difficult to eradicate or manage using oral or IV antibiotics, and there is currently no standard of care to manage the infection in CF patients despite the high need.[3] In contrast to the established treatment of *Pseudomonas aeruginosa* infection with inhaled antibiotics, there is no FDA-approved inhaled antibiotic treatment available for MRSA infection.

IV vancomycin or linezolid are the most commonly used drugs for the treatment of acute pulmonary exacerbation in CF patients with MRSA infection, and they may be used in combination with other IV antibiotics in patients with simultaneous Gram-negative infections, such as *Pseudomonas aeruginosa*. For MRSA lung infection, vancomycin is available only in IV form, and while highly effective against MRSA and other Gram-positive bacteria, chronic home-based use of IV vancomycin is not practical, and chronic use has also been associated with systemic toxicity, especially renal toxicity and ototoxicity.

According to research conducted by Savara, there is increasing clinical need to treat chronic MRSA infection in CF. In the absence of an inhaled antibiotic, there is emerging use of oral anti-MRSA antibiotics in an attempt to suppress the MRSA infection, and in hope of reducing the occurrence of acute pulmonary exacerbations. In a survey conducted by Savara, 27 % of the surveyed CF specialists in the US regularly utilize antibiotics targeting MRSA as a suppressive treatment (any dosage form) in patients with frequent exacerbations or other symptoms for which MRSA is considered a cause or contributing factor. This practice is emerging despite the absence of established consensus or guidelines relating to the use of oral anti-MRSA antibiotics in CF, or evidence of efficacy established in controlled studies.

As with current inhaled anti-pseudomonal drugs, Savara believes that there is significant clinical advantage in delivering an anti-MRSA antibiotic, such as vancomycin, directly to the site of infection to maximize the clinical efficacy, reduce systemic exposure and the risk of adverse effects, and to enable convenient use of the product outside of the hospital setting. The aerosolized IV form of vancomycin, administered by nebulization, has been used in multiple small published clinical studies, mainly to treat ventilator-associated pneumonia in an intensive care setting. In these studies and case reports, nebulized vancomycin had good antibacterial efficacy and was generally well tolerated. In recent years, according to interviews conducted by Savara, many of the leading CF centers in the United States have explored the use of inhaled vancomycin to treat MRSA infected CF patients on a chronic basis, by nebulizing the IV form of vancomycin. The experience gained from this type of treatment has been encouraging, and provides anecdotal reports of the safety and clinical utility of inhaled vancomycin for periods exceeding many years in some patients. Similarly, in the 1990 s, nebulized IV tobramycin was explored as a treatment of *Pseudomonas aeruginosa* infections in CF patients. This experience stimulated the development of TOBI®, which has become the most widely used inhaled antibiotic worldwide, and a cornerstone of chronic treatment of *Pseudomonas aeruginosa* lung infection in CF.

Savara believes that inhaled antibiotics, as well as other palliative treatments, will continue to have a central role in the management of CF. Various disease modifying drugs, such as CF Transmembrane Conductance Regulator (CFTR) modulators, that attempt to address the underlying cause of CF, i.e. to restore or improve the function of the CFTR protein that is defective or dysfunctional in CF patients, have recently been launched. Whereas these disease-modifying drugs on average result in modest improvement in lung function and potentially slower rate of lung function decline, patients on these drugs continue to have chronic infections that require antibiotic treatment, and their

lung function continues to decline.

[3] Zobell JT, Epps KL, Young DC, Montague M, Olson J, Ampofo K, Chin MJ, Marshall BC, Dasenbrook E. Utilization of antibiotics for methicillin-resistant *Staphylococcus aureu*s infection in cystic fibrosis. Pediatric Pulmonology (June 2015) Volume 50, Issue 6, pages 552 559

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AeroVanc Product Description

AeroVanc, or Vancomycin Hydrochloride Inhalation Powder, is a novel inhaled formulation of vancomycin being developed for the treatment of persistent MRSA lung infection in patients with CF. Vancomycin is a glycopeptide antibiotic that was discovered in the mid-1950 s and is commonly used in the prophylaxis and treatment of infections caused by Gram-positive bacteria. Vancomycin acts by inhibiting proper cell wall synthesis of aerobic and anaerobic Gram-positive bacteria, and is generally not active against Gram-negative bacteria.

AeroVanc consists of a capsule dosage form containing a proprietary dry powder formulation of vancomycin hydrochloride intended for oral inhalation with the AeroVanc inhaler. The AeroVanc inhaler is a commercialized, hand-held, manually operated, breath-activated device.

Savara anticipates that AeroVanc will be used predominantly to suppress chronic MRSA lung infection, which has the potential to improve patients lung function and respiratory symptoms, and to prolong the time to pulmonary exacerbation and need of systemic antibiotics. AeroVanc is not intended to replace IV vancomycin or other IV antibiotics in the treatment of acute pulmonary exacerbations associated with MRSA. However, chronic AeroVanc use has the potential to reduce the occurrence of these exacerbations, and thereby the need for IV treatments and hospitalizations.

Savara believes there will be broad adoption of AeroVanc in CF once available based on a high level of interest for the product from direct clinician surveys, as well as market research of key opinion leaders in the field of CF. Notably, a clear majority (94 %) of the surveyed CF physicians in the United States would expect to prescribe AeroVanc to their patients with MRSA lung infection, if approved by the FDA. Likewise, according to payer interviews conducted in the United States, an AeroVanc launch would receive reimbursement support given the high unmet need in an orphan indication and a current lack of comparable products.

Clinical Development of AeroVanc

Phase 3

Savara intends to initiate a Phase 3 clinical study designed to demonstrate the safety and efficacy of AeroVanc in CF patients with persistent MRSA lung infection. The plan is to initiate this trial in the third quarter of 2017. The study is planned to be conducted primarily in the United States and Canada.

Savara has received detailed guidance from the FDA on the design of the study, and believes that the planned study is in accordance with the FDA s requirements for a sole pivotal study to be used in an NDA submission. The study has also been planned in consultation with the Cystic Fibrosis Foundation s Therapeutic Development Network. The Phase 3 study is designed to detect whether the administration of AeroVanc results in a significant improvement in lung function. The study will assess a 32 mg dose administered twice a day for three on/off cycles of 28 days. The planned primary efficacy endpoint is absolute change from baseline in FEV_1 percent predicted, a commonly used measure of lung function. Other efficacy endpoints include the time to use of other antibiotics for pulmonary infection, and a respiratory symptom score.

The planned Phase 3 study is a randomized (1:1), double-blind, placebo-controlled study of AeroVanc in approximately 200 CF patients with persistent MRSA lung infection. The plan is to enrich the study with younger patients, by enrolling 75 % of the subjects between the ages of 6 and 21 years. This was the population most responsive to treatment in the Phase 2 study, and will form the primary analysis population of the study. The duration of the study drug (AeroVanc or placebo) administration will be three cycles of 28 days on drug and 28 days off drug,

during which time the primary efficacy endpoint will be measured and assessed. Following the efficacy study period, subjects will transition into another three cycles (28 days on treatment, 28 days off treatment per cycle) of open label AeroVanc use to provide more information on long-term safety.

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The planned primary efficacy endpoint of the study is the mean absolute change from baseline in FEV_1 percent predicted. In accordance with guidance from the FDA, the endpoint will be analyzed sequentially at Week 4 (first treatment cycle), and at Week 20 (third treatment cycle). Both time points will be tested at a statistical significance level of p = 0.05 due to the sequential nature of the analysis. Savara believes that a statistically significant improvement at Week 20 would provide support for a chronic treatment label, whereas improvement at Week 4 only may result in a more restricted label. Approval in any form is subject to the positive evaluation of the clinical meaningfulness of the treatment effect, judged by the review of all data, including safety data, and the outcome of key secondary endpoints, such as time to use of other antibiotics.

In the single-cycle Phase 2 study, with missing data imputed using conservative rules adopted by the FDA, a difference in the mean absolute change in FEV_1 percent predicted of 4.3 % was observed between the treatment arms in subjects below 21 years of age. Based on the observed treatment effect size and variability, a sample size of 45 subjects per arm would provide 90 % power to detect a statistically significant difference at an alpha level of 0.05. To account for a potential loss of power caused by premature discontinuations in a three-cycle study, a sample size of 75 subjects per arm will be enrolled.

Selection of the dose for the study was made based on the Phase 2 study in CF patients. In that study, administration of the 32 mg bid dose resulted in sputum trough vancomycin concentrations that were on average more than 100-fold above the observed minimum inhibitory concentration (MIC_{90}) value, suggesting that the concentrations reached after repeated administration of the 32 mg bid dose are likely to be sufficient for effective management of MRSA infection. In terms of safety and tolerability, the 32 mg AeroVanc dose did not appear significantly different from placebo, and produced encouraging trends of efficacy in all key endpoints in subjects below 21 years of age. In contrast, the higher AeroVanc dose of 64 mg bid was not as well tolerated in the older subjects (above 21 years of age), resulting in an increased number of premature discontinuations of the study drug treatment in this subgroup.

After the completion of the Phase 3 study, Savara intends to submit an NDA applying the 505(b)(2) regulatory pathway. In addition to being designated an Orphan Drug Product and QIDP, AeroVanc has been designated a Fast Track development program by the FDA.

Completed Clinical Studies

Phase 1

In a Phase 1 single escalating dose study, AeroVanc was shown to be generally well tolerated and safe, with a favorable pharmacokinetic profile. In the study, AeroVanc inhalation powder was administered to 18 healthy volunteers (doses of 16 mg, 32 mg, and 80 mg), and seven patients with CF (doses of 32 mg, and 80 mg). AeroVanc demonstrated a relatively slow pulmonary absorption phase (t_{max} of 1.33 h 2.08 h), followed by distribution and elimination comparable to IV administration. The mean absolute bioavailability across all AeroVanc doses was 49 % (SD 8 %), with no apparent differences observed between the doses. The absolute bioavailability closely corresponds with the pulmonary absorption of vancomycin, considering that vancomycin is not absorbed from the gastrointestinal tract. The mean C_{max} of AeroVanc after an 80 mg dose was 618 ng/mL, corresponding to approximately one fifth of the dose adjusted C_{max} after a 250 mg dose of IV vancomycin. The dose linearity of AeroVanc in terms of C_{max} and AUC values was excellent ($R^2 > 0.99$). In the CF patients, all subjects had sputum vancomycin concentrations in high excess of the minimum inhibitory concentration, or MIC, of vancomycin for MRSA (2 µg/mL) at one hour after the administration of AeroVanc with both the 32 mg and the 80 mg dose (mean of 106 µg/mL, and 261 µg/mL, respectively). At later time points, the concentrations decreased, but on average remained above the MIC values for up to 24 hours. Variability in sputum concentrations was high, as expected.

All adverse events in the healthy volunteers were classified as mild, and all events that were considered probably drug-related involved local irritation effects and resolved spontaneously and rapidly (between 15 and 60 minutes).

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Small reduction in the post-dose FEV_1 (7 % 11 %) was observed in three subjects after the 80 mg dose. None of the subjects required bronchodilator treatment, and the changes were considered by the independent Drug Safety Monitoring Board to be clinically non-significant. In CF patients, chest congestion and/or chest tightness were reported by four of the seven patients, and there appeared to be a slight trend towards more adverse events at the higher dose (80 mg). All reported respiratory adverse events were mild, none of the patients felt distressed, and the events either did not require treatment or resolved after airway clearance and/or albuterol inhalation. Based on the sputum concentration data, dose levels of 32 mg and 64 mg twice a day were selected for use in the Phase 2 study.

Phase 2

In a Phase 2 clinical study in CF patients with persistent MRSA lung infection, AeroVanc demonstrated reduced MRSA density in sputum, and showed encouraging trends of improvement in lung function, prolongation of the time to use of other antibiotics, and respiratory symptoms, with best responses in subjects below 21 years of age. Savara believes that the consistency of the responses across the different endpoints, as well as the magnitude of change in the younger subjects, supports advancing the product into a Phase 3 clinical study. The results of the Phase 2 study have been summarized and presented to the FDA in an End of Phase 2 Meeting, and the FDA has subsequently given Savara detailed guidance on the design and analysis of a Phase 3 study, as presented above in section Phase 3 . The key findings of the Phase 2 study are described below.

The study was a randomized, double-blind, placebo-controlled study in 87 CF patients with persistently positive MRSA culture from their sputum samples. The Phase 2 study consisted of a 28-day AeroVanc treatment at a dose level of 32 mg bid or 64 mg bid, with an eight-week follow-up. The study was conducted at 40 sites in the United States. Quantitative MRSA cultures from spontaneously expectorated sputum samples were used as the primary endpoint of the study. The average baseline values in both active drug cohorts, as well as the placebo cohorts were high, ranging from 6.78 to 7.65 $\log_{10}$ CFU/mL. A reduction from baseline in MRSA CFU was observed in both 32 mg and 64 mg dose cohorts in the ITT population, by -0.42 $\log_{10}$ CFU/mL ($p = 0.50$), and -0.60 $\log_{10}$ CFU/mL ($p = 0.015$), respectively ($p = 0.012$ for cohorts pooled).

MICs of vancomycin for MRSA cultured from the sputum samples were determined using a broth microdilution technique at baseline, at each visit during the administration of AeroVanc, as well as at the post-administration follow-up time points. The distribution of MIC values was very narrow, with the MIC_{50} and MIC_{90} both at 0.5 µg/mL at baseline. At baseline, all strains were susceptible to vancomycin, with MIC values £ 1 µg/mL, and there were no notable changes in the MIC distribution at any of the time points following the baseline sample, suggesting the susceptibility of MRSA to vancomycin was not affected by the 28 days of pulmonary administration of AeroVanc.

As illustrated in the graph below, vancomycin peak and trough concentrations in sputum at Day 8 and Day 29 were in high excess over the generally accepted level of MIC (mean C_{trough}/MIC ratio > 35) after multiple dosing in all subjects at both dose levels, with apparent dose-dependency, but no notable difference in C_{trough} between the two time points. The generally accepted MIC of vancomycin for MRSA is illustrated below by the dotted line, at 2 µg/mL.

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Vancomycin sputum concentrations after administration of AeroVanc at various time points

In terms of safety, the most frequent adverse events reported were related to the respiratory system. The AeroVanc 32 mg bid dose was well tolerated, with no significant difference in adverse events as compared with placebo. However, a higher incidence of adverse events, most frequently consistent with signs and symptoms of bronchoconstriction, and a significantly higher rate of premature study drug discontinuations were seen in adult patients with the 64 mg bid AeroVanc dose, as compared with placebo and the 32 mg AeroVanc dose. The discontinuations were most commonly reported to be due to drug intolerability (mainly bronchoconstriction and/or chest tightness) or pulmonary exacerbation, and typically occurred within the first two weeks from the start of drug administration.

Based on the observed clinical results in the 32 mg cohort of subjects below 21 years of age, the observed high vancomycin concentrations in sputum at both dose levels, and the high discontinuation frequency in adult subjects at the 64 mg dose, the Phase 3 study is planned to be conducted using the 32 mg dose, and will focus enrollment on subjects below 21 years of age. Accordingly, the key Phase 2 data from this cohort, below 21 years of age, are summarized below.

To assess effects of AeroVanc on lung function, absolute change in FEV_1 percent predicted from baseline was measured at each study visit. While AeroVanc reduced MRSA density in sputum, the change in FEV_1 compared with placebo did not reach statistical significance in subjects of all ages. Notably, *post hoc* analyses identified encouraging improvement in FEV_1 in subjects 21 years of age or younger, consistently across all time points during the treatment period, as illustrated below. The mean absolute change in FEV_1 percent predicted observed in the AeroVanc arm is considered clinically meaningful, with an improvement ranging between 4 % and 6 % (or 6 % and 10 % on a relative change basis). In this subgroup, the difference between AeroVanc and placebo was statistically significant at the 2-week time point ($p = 0.05$). A mean reduction of 0.8 $\log_{10}$ CFU/mL from baseline in MRSA CFUs, the primary endpoint, was also observed after 28 days of AeroVanc administration in subjects below 21 years of age, as illustrated below, the difference between AeroVanc and placebo being statistically significant ($p = 0.05$).

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Change from baseline in FEV_1

(Per Protocol Population, 32 mg dose cohort, below 21 years of age, n = 16)

These results are consistent with previous studies using inhaled tobramycin (TOBI® or TOBI Podhaler®) for the treatment of *P. aeruginosa* infection in CF, where improvement in FEV_1 was predominantly seen in younger subjects[4]. In the early TOBI trials, reported in the 1990 s, during an era when the use of inhaled antibiotics was not yet prevalent, children and adolescents (below 18 years of age) showed relative improvements of greater than 14 % as compared with only 6 % in adults[5]. However, in more recent studies, reported in 2012, the relative FEV_1 improvements have been considerably smaller, either being absent or less than 2 % in adults.[6]

As illustrated below, a mean reduction of 0.8 $\log_{10}$ CFU/mL from baseline in MRSA CFUs, the primary endpoint, was observed after 28 days of AeroVanc administration in subjects below 21 years of age, the difference between AeroVanc and placebo being statistically significant (p = 0.05).

4 Weers J. Inhaled antimicrobial therapy Barriers to effective treatment. *Advanced Drug Delivery Reviews*. (2015): 24-43.

5 Ramsey BW, Pepe MS, Quan JM, Otto KL, Montgomery AB, Williams-Warren J, Vasiljev-K M, Borowitz D, Bowman CM, Marshall BC, Marshall S, Smith AL. Intermittent administration of inhaled tobramycin in patients with cystic fibrosis. Cystic Fibrosis Inhaled Tobramycin Study Group. *New England Journal of Medicine.* 1999 Jan 7;340(1):23-30.

6 TOBI Podhaler SBA; NDA-201688, 2012

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Change in MRSA density in sputum

(Intent-to-treat Population, 32 mg dose cohort, below 21 years of age, n = 20)

A greater reduction in CFRSD-CRISS, the respiratory symptom score, was observed in the below 21-year age group consistently at all time points, as compared with placebo, but the difference was not statistically significant.

A trend of prolongation of the time to use of another antibiotic for respiratory symptoms was observed in the AeroVanc arm of the 32 mg dose cohort, as compared with placebo, illustrated below. Whereas in this single cycle study several subjects in the AeroVanc arm were prescribed other antibiotics at the scheduled one-month post-treatment visit (approximately Day 56), such treatment would not be expected to be prescribed during chronic AeroVanc treatment, or in a multiple-cycle study, because the timing would coincide with the start of a new AeroVanc treatment period.

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Time to use of other antibiotics for respiratory infection

(Intent-to-treat Population, 32 mg dose cohort, below 21 years of age, n = 20)

In summary, AeroVanc reduced MRSA density in sputum, and showed encouraging trends of improvement in lung function, prolongation of the time to use of other antibiotics, and respiratory symptom, with best responses in subjects below 21 years of age. Savara believes that the consistency of the responses across the different endpoints, as well as the magnitude of change in the younger subjects, supports advancing the product into a Phase 3 clinical study.

Human factor study

Savara has performed a human factor study to better understand patient reactions to the AeroVanc inhaler device, the drug capsule and written instructions. 14 CF patients, representing a variety of sex, ethnicity and dominant hand preference and ranging in age from 12 to 56 years participated in the study. Patients were given the device, capsules and instructions to simulate use (no drug) and provide feedback. In summary, all patients were able to use the device properly and no device design issues were identified that could impact proper use.

Overview of Molgradex

Background on PAP

PAP is a rare lung disease, which affects up to seven out of a million people in the United States[7], and has a similar prevalence in Japan[8]. PAP is characterized by the build-up of lung surfactant in the alveoli, or air sacs, of

7 Trapnell BC, Avetisyan R, Carey B, Zhang W, Kaplan P, Wang H. Prevalence of pulmonary alveolar proteinosis (PAP) determined using a large health care claims database. Am J Respir Crit Care Med. 2014;VOL:abstract A6582.

8 Inoue Y, Trapnell BC, Tazawa R, Arai T, Takada T, Hizawa N et al. Characteristics of a large cohort of patients with autoimmune pulmonary alveolar proteinosis in Japan. Am J Respir Crit Care Med 177: 752 62, 2008

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the lungs. The surfactant consists of proteins and lipids, and is an important physiological substance that coats the inside of the alveoli to prevent the lungs from collapsing. The lungs continuously produce new active surfactant. In a healthy lung, the old and inactivated surfactant is cleared and digested by immune cells called alveolar macrophages. In PAP lungs, however, the macrophages fail to clear the surfactant from the alveoli, leading to gradual accumulation of excess surfactant in the alveoli. The root cause of PAP is an autoimmune response against a naturally occurring protein of the body, GM-CSF. Pulmonary macrophages need to be stimulated by GM-CSF to function properly, but in autoimmune PAP, GM-CSF is deactivated by antibodies against GM-CSF, rendering the macrophages unable to perform their tasks, such as clearing the surfactant from the alveoli.

PAP commonly affects men in early middle age, but both sexes and subjects of any age can be affected. As a result of the accumulation of excess surfactant, gas exchange in the lungs is obstructed, and patients start to experience shortness of breath, and decreased exercise tolerance. Shortness of breath is typically first observed upon exertion, but as the disease progresses, also at rest. Patients may experience chronic cough, as well as episodes of fever, chest pain, or coughing blood, especially if secondary lung infection develops. In the long term, the disease can lead to serious complications, including lung fibrosis and the need for lung transplant. Mortality due to PAP has decreased over the last decades with better clinical management, but in rare cases serious lung infections or respiratory insufficiency may lead to death.

Current treatment options of PAP

The current standard of care for PAP is a procedure called whole lung lavage, or WLL, which entails washing out the lungs with saline under general anesthesia. WLL is an invasive and inconvenient procedure that requires highly experienced physicians at specialist sites. The procedure in conducted in an operating room, thereby requiring hospitalization, and admission to intensive care after the procedure. In many patients, WLL only provides temporary symptomatic relief, and once the lungs refill with surfactant, the WLL procedure needs to be repeated.

As there are no approved drug treatments available for PAP, Savara believes there is a high need for a convenient and efficacious medicinal treatment. Savara believes that inhalation of GM-CSF directly into the lungs has the potential to replace the inactivated GM-CSF, and thereby to restore the surfactant clearing activity of the alveolar macrophages. As a result, Savara believes that inhaled GM-CSF has the potential for considerable improvement in oxygenation and exercise tolerance. An injectable form of GM-CSF, sargramostim (Leukine®, Sanofi-Aventis), is approved and on the market in the United States for IV and subcutaneous administration for the treatment of neutropenia caused by cancer chemotherapy, but there is currently no inhalation formulation of GM-CSF available.

The potential benefits of inhaled GM-CSF in PAP, together with the availability of sargramostim, have stimulated independent clinicians and academic researchers in the United States, Europe, and Japan to study the safety and efficacy of GM-CSF, administered by inhalation, in PAP patients. Several such investigator-sponsored open-label clinical studies and case studies of inhaled GM-CSF treatment have been published, with promising results on the efficacy and safety of the treatment.[9,10,11] In total, treatment of more than 80 PAP patients with

[9] Tazawa R, Trapnell BC, Inoue Y, Arai T, Takada T, Nasuhara Y, et al. Inhaled Granulocyte/Macrophage Colony Stimulating Factor as Therapy for Pulmonary Alveolar Proteinosis. Am J Resp Crit Care Med 181: 1345-1354, 2010

[10] Wylam ME, Ten R, Prakash UB, Nadrous HF, Clawson ML and Anderson PM (2006). Aerosol granulocyte-macrophage colony-stimulating factor for pulmonary alveolar proteinosis. Eur Respir J 27(3): 585-93

[11] Papiris SA, Tsirigotis P, Kolilekas L, Papadaki G, Papaioannou AI, Triantafillidou C, et al. (2014). Long-term inhaled granulocyte macrophage-colony-stimulating factor in autoimmune pulmonary alveolar proteinosis: effectiveness, safety, and lowest effective dose. Clin Drug Investig 34(8): 553-64

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inhaled GM-CSF has been reported in open-label studies or retrospective cohorts, as well as several individual case reports. Whereas the majority of the patients described in. the literature received sargramostim, the results indicate that both sargramostim and molgramostim have the potential for a very positive impact on oxygenation and clinical symptoms in PAP patients.

According to Savara s review of published literature, few safety issues related with molgramostim or sargramostim inhalation in patients with PAP have been reported. However, there is still limited information available on the long-term safety of inhaled GM-CSF. In indications other than PAP, more than 100 patients, mainly with a cancer diagnosis, have received inhaled sargramostim, in doses up to 4000 µg/day. Pulmonary toxicity was the most frequently reported toxicity at high doses. An increase in both number and severity of adverse events with increasing dose has been observed. However, due to the underlying diseases it was often difficult for the investigators to assess causality of the adverse event cases.

Molgradex Product Description

Molgradex is a novel inhaled formulation of recombinant human GM-CSF being developed for the treatment of PAP. The active drug substance, molgramostim, is a non-glycosylated form of GM-CSF. GM-CSF is an endogenous growth factor that stimulates the proliferation and differentiation of hematopoietic cells (blood and immune cells), mainly granulocytic and monocytic cell lines, which serve as the body s first line of defense against bacteria and viruses, and also function to clear cellular debris and waste substances from the body. Molgramostim is produced in a strain of *Escherichia coli* bearing a genetically engineered plasmid containing a human GM-CSF gene.

Molgradex, is a sterile nebulizer solution in a vial containing 300 µg of molgramostim, designed to be administered once daily by inhalation via a high efficiency nebulizer (Investigational eFlow Nebuliser System, PARI Pharma GmbH, Germany). The PARI eFlow Nebulizer system for use with investigational drug products is a reusable electronic inhalation system that has been optimized for administration of Molgradex.

Savara anticipates that Molgradex will be used as a long-term therapy in patients with PAP. The optimal duration of treatment is currently not known, and is likely to vary between patients depending on the disease severity and the natural course of their disease. Molgradex treatment may not entirely eliminate the need for WLL in all patients, but based on interviews conducted by Savara, PAP centers that have experimented with long-term inhaled GM-CSF have seen a considerable reduction of WLL procedures.

Molgradex was granted Orphan Drug Designation by the FDA in October, 2012, and by EMA in July, 2013, for the treatment of PAP. Safety and tolerability of inhaled Molgradex has been tested in a Phase 1 clinical study in 42 healthy human volunteers. Safety and efficacy of inhaled Molgradex in PAP patients is currently being tested in a Phase 2/3 clinical study in up to 51 PAP patients. Since 2014, Molgradex has been available in several European countries for the treatment of PAP for named patients following unsolicited physician requests.

Clinical Development of Molgradex

Phase 2/3

Savara is currently conducting a Phase 2/3 clinical study on Molgradex in Europe and Japan in PAP patients. Based on the scientific advice received from the EMA, Savara believes the study has the potential to be accepted as the sole pivotal study in support of a marketing authorization application in the European Union. The aim of this randomized, double-blind, placebo-controlled study is to compare efficacy and safety of Molgradex with placebo in up to 51 PAP patients. In the study, Molgradex 300 µg is administered once daily for up to 24 weeks, with a follow-up period up to

48 weeks.

Patients diagnosed with autoimmune PAP and fulfilling all other entry criteria are randomized to receive double-blind treatment for up to 24 weeks in one of three treatment arms: 1) Molgradex 300 µg administered

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once daily, 2) Molgradex 300 µg and matching placebo administered daily in 7-day intermittent cycles of each, or 3) inhaled placebo administered once daily. The study is conducted at multiple sites in the European Union, Russia, Israel and Japan.

The primary endpoint is the absolute change from baseline of arterial-alveolar oxygen gradient ((A-a)DO_2) after 24 weeks of treatment. This endpoint is a measure of patient s oxygenation status, and the endpoint value is expected to decrease as the physical obstacle of gas exchange is reduced by clearance of excess surfactant from the lungs. Key secondary endpoints assessed after 24 weeks of treatment include the number of patients in need of WLL during 24-week treatment, as well as change in the vital capacity of the lungs after 24-week treatment.

Based on the sample size calculation for the study, 42 evaluable patients (14 in each treatment group) are required to be randomized to have 90 % power to detect a difference of 10 mmHg in A-a(DO_2) between the two active arms combined and placebo, using a significance level of 0.01. To account for potential study discontinuations or non-evaluable patients, a total of up to 51 patients is planned to be randomized.

A data safety monitoring board, or DSMB, provides safety oversight in the Phase 2/3 study. Following its first meeting in October, 2016, no concerning safety issues were identified and the DSMB endorsed continuation of the study as planned.

Savara has conducted a Type C meeting with the FDA to seek guidance on the nonclinical and clinical requirements for an NDA submission in the United States. The FDA acknowledged that a single Phase 3 study may potentially be sufficient to support approval of Molgradex for treatment of PAP, provided that it demonstrates persuasive evidence of efficacy across clinically meaningful endpoints. Whereas the current study design and sample size of the IMPALA study may not be acceptable to the FDA as a sole pivotal study, the FDA gave initial guidance on modifications of the study that could potentially make it acceptable as the sole study for NDA submission and approval. Savara will diligently continue its interaction with the FDA in order to reach agreement on the clinical program structure and details, and targets to complete the negotiations by the end of the third quarter of 2017. The final outcome may involve the amendment of the IMPALA study to serve as a sole pivotal study, or the conduct of a separate pivotal clinical study prior to submitting an NDA.

Completed Clinical Studies

Phase 1

In a Phase 1 Molgradex study in 42 healthy adult volunteers, the drug was generally well tolerated and produced dose-dependent increases in total and differential white blood cell (WBC) counts consistent with the known pharmacologic effect of GM-CSF. The study was a randomized, double-blind, placebo-controlled, single ascending dose (SAD) and multiple ascending dose (MAD) study to assess the safety, tolerability, pharmacokinetics, and pharmacodynamics of Molgradex. In the SAD part, 18 subjects were included with four subjects in each of the three SAD dose levels (150 µg, 300 µg and 600 µg) and six subjects received placebo. In the MAD part, 24 subjects were included with nine subjects in each of the two MAD dose levels (300 µg or 600 µg) and six subjects received placebo for six days.

In the SAD part, GM-CSF was absorbed into the systemic circulation with a t_{max} of two hours after inhalation of Molgradex, however, at picogram levels, 50 to 100 times lower than has been observed after similar doses of GM-CSF administered intravenously. Total systemic exposure (AUC_{last}) increased with dose, ranging between 13 and 138 pg h/mL and maximum concentration (C_{max}) ranging between 9.1 and 41 pg/mL (C_{max} was similar for the 300 and 600 µg dose levels). In the MAD part, there was evidence of some accumulation after multiple dosing; C_{max} increased

from 32 pg/mL on Day 1 to 90 pg/mL on Day 6 at the 300 µg dose, and from 96 pg/mL on Day 1 to 251 pg/mL on Day 6 at the 600 µg dose level. Likewise, AUC_{last} increased from 97 to 248 pg h/mL from Days 1 to 6 for the 300 µg dose level and from 350 to 802 pg h/mL for the 600 µg dose level. Minimum measurable plasma concentrations (C_{min}) on Day 6 were 3.6 and 5.1 pg/mL measured at 8 and 12 hours, respectively for the 300 and 600 µg dose levels.

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In subjects treated with Molgradex, a slight increase in total WBC and differential counts (primarily within normal reference ranges) was observed in a dose-dependent manner, in-line with the known biological mode-of-action of GM-CSF, as illustrated in the graph below.

Mean WBC Over Time and After Multiple Ascending Doses

The primary aim of the Phase 1 study was to assess the safety and tolerability of Molgradex. No meaningful difference in the frequency or severity of AEs was observed between Molgradex 300 µg and placebo. The most common AE was cough, reported in 21 out of 30 (70 %) subjects receiving Molgradex and 8 out of 12 (67 %) patients receiving placebo, and there was no difference in the causality assessment between the treatment arms. A higher number of treatment-related AEs were observed at the 600 µg dose compared to the 300 µg dose and placebo in the MAD part. There were no serious or severe adverse events, dose-limiting toxicity or other remarkable findings of clinical concern in the safety data.

Nonclinical Studies

AeroVanc Inhalation Toxicology Studies

The nonclinical toxicology profile of AeroVanc has been characterized in a series of acute and repeated dose inhalation toxicity studies in rats and dogs, as well as ICH/FDA prescribed safety pharmacology studies involving the cardiovascular, pulmonary, and central nervous systems. In these studies, a gradation of dose levels, including the maximum tolerated dose or the maximum technically achievable dose, were evaluated in both species.

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Following 28 days of inhalation exposure, there were no indications of systemic toxicity noted in either the rats or dogs. As expected, there were a number of microscopic changes noted along the respiratory tract and in the lungs that were considered to represent local irritative effects, adaptive changes, and normal physiological responses to the impaction of particles along the respiratory tract and deposition of particles in the lungs. A 28-day recovery period showed complete to partial reversibility of the findings, with no notable difference between the active dose groups and the vehicle control group when compared to the air control. Based on the results of these 28-day studies, the No Observed Adverse Effect Level (NOAEL) was established for both species, and AeroVanc was considered safe for the purpose of conducting the Phase 2 study.

After completion of the Phase 2 clinical study, Savara received guidance from the FDA regarding the necessary toxicology studies to support the planned Phase 3 study and NDA submission. In accordance with the FDA s guidance, a 91-day inhalation toxicology study was conducted in rats. Savara believes that the NOAEL established in this study supports the proposed Phase 3 study with the intended dose level.

A two-year GLP inhalation carcinogenicity study of AeroVanc in rats is mandated by the FDA prior to submission of an NDA. The purpose of this study is to determine whether lifetime pulmonary exposure to AeroVanc at high doses may result in any gross or microscopic indications of neoplasia in rats. The 91-day inhalation toxicology report and the carcinogenicity study protocol have been evaluated by the FDA Carcinogenicity Assessment Committee (CAC) in a Special Protocol Assessment (SPA) to confirm that the study design and dose levels are adequate to meet scientific and regulatory requirements. The CAC has notified Savara of their feedback, which has been considered in finalizing the protocol. The study will be conducted by a specialized contract research organization that has conducted all prior inhalation toxicology studies of AeroVanc, and has the required capabilities and operating procedures in place.

Molgradex Pharmacology Studies

The pharmacology of GM-CSF in the lungs involves stimulation of alveolar macrophage and neutrophil function to maintain alveolar surfactant homeostasis, alveolar stability, lung function, and lung host defense. For example, pulmonary GM-CSF is required for the terminal differentiation of alveolar macrophages and acquisition of numerous functions including expression of multiple receptors, non-specific and receptor-mediated endocytosis and phagocytosis, for pulmonary neutrophil recruitment during infection, clearance of bacteria, viruses, mycobacteria, and other pathogens, as well as for surfactant clearance.

The pharmacodynamics of human GM-CSF receptor activation by Molgradex was determined as part of Savara s studies of species evaluation and selection for inhalation toxicology and reproductive toxicology studies. As illustrated below, the effective concentration of molgramostim from Molgradex required to stimulate a half maximal receptor signaling response (EC_{50}), as measured by phosphorylation of STAT5, was similar to that of commercially available rhGM-CSF. Thus, Molgradex is expected to possess the expected biological regulatory action of GM-CSF on alveolar macrophages in the lungs.

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GM-CSF receptor function by Molgradex or control recombinant human GM-CSF

Further *in vitro* or *in vivo* nonclinical studies investigating the pharmacological activity of Molgradex are not planned.

Molgradex toxicology studies

The nonclinical toxicology profile of Molgradex has been characterized in a series of repeated dose inhalation toxicology studies and safety pharmacology studies in cynomolgus monkeys, as well as reproductive toxicology studies in rabbits. In these studies, a gradation of dose levels was evaluated in the respective species.

Three GLP-compliant inhalation toxicology studies were conducted, including a 6-week inhalation toxicity study in young sexually immature monkeys, a 13-week inhalation toxicity study in sexually mature monkeys used to explore effects on male and female reproductive organs, and a 26-week inhalation toxicity study to investigate chronic toxicity. All studies are fully compliant with relevant guidelines from ICH/FDA.

After inhalation of Molgradex, local effects in the lungs were characterized by infiltrating inflammatory cells, mostly macrophages, accompanied by an increased cellularity in the lymphoid tissue that is associated with the respiratory tract and minimal to mild exudation of red blood cells into the alveoli. The infiltration of inflammatory cells was not associated with any other signs of inflammation or impaired lung function, and it was considered an exaggerated pharmacological effect of molgramostim. The severity of the findings was graded slight at the lowest dose level, and moderate above this level. Duration of treatment did not affect the severity of this finding. Reduced severity of the lung and tracheobronchial changes following a four-week recovery period suggested partial resolution of the changes.

Based on the three studies conducted in monkeys, a NOAEL was established, and Molgradex was considered safe for the purpose of conducting Phase 1 and Phase 2/3 studies, with a safety margin of greater than five-fold using a clinical dose of 300 µg once daily.

Cardiovascular and respiratory parameters and effects on the central nervous system were evaluated in the 6-week and 26-week repeat dose inhalation toxicology studies. It was concluded that repeated daily inhalation of Molgradex does not exert any clinically relevant effects on the heart, the lung or the central nervous system in cynomolgus monkeys.

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An embryo-fetal and developmental (EFD) toxicity study with Molgradex was conducted in rabbits, which show a similar pharmacological response as humans or monkeys, although at a lower potency. The EFD study revealed increases in post implantation loss, decreases in the number of live implants, effects on sex ratio and a slight increase in the incidence of major malformations in fetuses at the highest dose (150 µg/kg/day), consistent with findings from other rhGM-CSF products. Studies in sexually mature monkeys have shown that molgramostim has no effect on male and female reproductive organs. Accordingly, appropriate risk minimization strategies are implemented for the clinical studies, and will be implemented for commercial stage use.

In addition to the studies conducted, a pre- and postnatal development study will be conducted prior to NDA submission.

Manufacturing and Supply

Savara does not own or operate manufacturing facilities to produce clinical or commercial quantities of any of its product candidates. Savara has fee-for-service contracts with well-established drug substance manufacturers, as well as drug product manufacturers covering all steps of the manufacturing process of its product candidates, and expects to continue utilizing this outsourcing model in the foreseeable future. All of the vendors used by Savara conduct their operations under current Good Manufacturing Practices, or cGMP, a regulatory standard for the manufacture of pharmaceuticals.

AeroVanc Manufacturing

AeroVanc is a high-performance inhalation powder formulation of vancomycin hydrochloride, applying a commercially-available capsule inhaler. The drug substance used in AeroVanc, Vancomycin Hydrochloride USP, is produced using microbial fermentation followed by purification, and is sourced from Xellia Pharmaceuticals Aps (Copenhagen, Denmark), a commercial manufacturer with two manufacturing facilities, one in China and one in Denmark. Both sites use the same cell line and manufacturing processes, and produce material of comparable quality. A long-term commercial supply agreement has been established with Xellia Pharmaceuticals Aps.

AeroVanc inhalation powder is a spray-dried powder containing a ratio of 9:1 by weight of vancomycin hydrochloride and l-leucine. L-leucine is an essential amino acid and has GRAS status as a food additive. Formulation studies showed that the addition of l-leucine improves inhalation performance *in vitro*, as measured by improved emitted dose and fine particle dose. The powder manufacturing is carried out by Hovione LLC (East Windsor, NJ), a vendor with two operational sites, one in the United States and one in Europe, with the same base equipment in each facility, that could be upgraded to produce material of comparable quality. The proprietary AeroVanc spray drying process creates very fine particles (smaller than five microns) required for efficient delivery to the lungs. Proprietary nozzle and cyclone technologies were developed to meet product performance and manufacturing throughput requirements. The powder production process has been successfully scaled-up from laboratory to commercial equipment. A long-term commercial supply agreement is under negotiation with Hovione LLC.

The finished product is manufactured from bulk AeroVanc powder by GlaxoSmithKline (GSK, Brentford, UK). At this final part of the manufacturing process, AeroVanc powder is conditioned and automatically filled into capsules each containing 16 mg of vancomycin. The capsules are then packaged into aluminum foil blisters to protect them from light and moisture. A long-term commercial supply agreement has been established with GSK for the finished product.

The inhaler device used for AeroVanc is manufactured by Plastiape S.p.A. (Lecco, Italy). The device was approved in the United States as part of the Aridol® new drug application (NDA 022368) on October 5th, 2010. A cosmetically

modified version of the device was approved in the United States as part of the Arcapta® Neohaler® new drug application (NDA 022383) on July 1st, 2011. An exclusive long-term commercial supply agreement has been established with Plastiape S.p.A.

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Savara has worked with its manufacturing partners to scale up processes, improve yields and production rates, and to transfer processes to commercial facilities with commercial equipment. Savara intends to produce the supplies for the pivotal Phase 3 clinical study utilizing the same manufacturing sites, equipment and processes that will be used for commercial supply.

Molgradex Manufacturing

The drug substance in Molgradex, molgramostim, is currently manufactured by Gema Biotech S.A. (GEMA, Buenos Aires, Argentina). All clinical and nonclinical studies to date have used material sourced from GEMA. In 2015, Savara decided to transfer the production to a European manufacturer, Synco Bio Partners B.V. (Synco, Amsterdam, The Netherlands), to secure commercial supply of the drug substance. The technology transfer process from GEMA to Synco is currently ongoing.

The drug product, Molgradex, is currently manufactured at Miltenyi Biotec GmbH (Berglisch Gladbach, Germany). The Molgradex formulation was initially developed to contain several excipients commonly used in freeze-dried formulations used for IV administration. More detailed formulation studies of the inhaled product showed that the physico-chemical stability and potency of the drug product was independent of the presence of these excipients. Accordingly, a simplified formulation without these excipients is in development, and Savara anticipates using this formulation for commercial supply. After the technology transfer process of the drug substance to Synco is complete, manufacture of the drug product will also be carried out at Synco. A master services agreement covering both the drug substance and the drug product has been established with Synco. A long-term commercial supply agreement will be established following the technology transfer.

Molgradex is administered to the lungs using the eFlow Nebulizer System, manufactured by PARI Pharma GmbH (Stamberg, Germany). The eFlow nebulizer has been CE certified (CE 0123) according to the Medical Devices Directive 93/42/EEC (as amended by Directive 2007/47/EC) as a class IIa device. The device has a 510(k) approval in US as a general device. Savara has an exclusive license and a long-term supply agreement with PARI covering the eFlow nebulizer for the administration of recombinant human GM-CSF.

Commercialization

Savara owns exclusive rights to AeroVanc and Molgradex in the United States, and all other major markets, except for Japan, where Savara has licensed the Molgradex rights to Nobelpharma Co., Ltd (Tokyo, Japan). Savara plans to pursue regulatory approvals for its products in the United States and the European Union, and to independently commercialize AeroVanc and Molgradex in the United States. In doing so, Savara may engage with strategic partners to help implement optimal sales and promotion activities. Savara s commercialization strategy will target key prescribing physicians, as well as provide patients with support programs to ensure product access. Outside of the United States, Savara plans to seek partners to commercialize its products via out-licensing agreements or other similar commercial arrangements.

License and Supply Agreements

Plastiape SpA

In September 2012, Savara entered into a supply agreement related to AeroVanc with Plastiape SpA, which was subsequently amended in June 2016 (the Plastiape Agreement). Pursuant to the terms of the Plastiape Agreement, Plastiape will supply dry powder inhalers to Savara on an exclusive basis for use with vancomycin for the diagnosis, management, prevention or treatment of lung diseases. Pricing under the Plastiape Agreement is on a per unit basis,

with the per unit price decreasing as the volume increases.

Xellia Pharmaceuticals ApS

In September 2016, Savara entered into a supply agreement related to the supply of the API for AeroVanc with Xellia Pharmaceuticals (the Xellia Agreement). Pursuant to the Xellia Agreement, Savara is obligated to

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purchase all of its requirements of the API from Xellia. The pricing under the Xellia Agreement is a set price per kg, with the price decreasing upon the commercial launch of AeroVanc.

PARI Pharma GmbH

In November 2014, Serendex entered into a license and collaboration agreement related to Molgradex with PARI Pharma GmbH (the PARI License Agreement), which Savara assumed as part of the Serendex Acquisition. Under the PARI License Agreement, Savara has a worldwide, exclusive license to commercialize PARI s eFlow Technology Nebulizer device for the pulmonary delivery of any liquid formulation containing hGM-CSF as the sole active pharmaceutical ingredient for nebulization. Additionally, Savara has the option to change the device subject to the PARI License Agreement to PARI s eFlow Technology Nebulizer CS and, until marketing approval, the option to negotiate an extension to the license to cover commercialization of the drug for pulmonary delivery via the PARI eFlow Inline device for the treatment of VAP and/or ARDS.

Under the terms of the PARI License Agreement, Savara is not permitted to work with third parties to develop any inhalation device or nebulizer for the pulmonary delivery of a pharmaceutical product containing hGM-CSF as the sole active ingredient. This restriction extends until (i) in the European Economic Area, marketing approval of the product in Europe or the United States, whichever is later, or (ii) in the rest of the world, the term of the PARI License Agreement.

In consideration of rights granted by PARI, Serendex paid a onetime upfront fee and agreed to pay an hourly rate for work performed by PARI under work orders issued pursuant to the PARI License Agreement. Additionally, Savara is obligated to make future milestone payments to PARI based upon (i) the successful completion of certain clinical trials, (ii) submissions for regulatory approval in the United States, the European Union or Japan, and (iii) the first marketing approval for the product in the United States, the European Union or Japan.

If Savara successfully commercializes any product candidate subject to the PARI License Agreement in a country, Savara is responsible for royalty payments equal to a percentage of net sales. Savara is obligated to make such royalty payments until the later of (i) the expiration of the last valid claim in an issued patent covering a portion of the PARI device in the applicable country or (ii) 15 years after the first commercial sale of Molgradex with the PARI device in that country (the PARI Royalty Period). If there is no such valid patent claim covering the applicable PARI device, the royalty owed to PARI will be decreased by a specified percentage.

The license term extends on a country by country basis until the end of the PARI Royalty Period or until mutually agreed by the parties.

In April 2015, Serendex entered into a commercial supply agreement with PARI (the PARI Supply Agreement) related to the supply of the PARI eFlow Technology Nebulizer and related accessories for commercial use with its products after marketing approval is obtained. Savara assumed the PARI Supply Agreement as part of the Serendex Acquisition. Pursuant to the terms of the PARI Supply Agreement, Savara is obligated to purchase from PARI (i) within the European Economic Area, (a) during the first five years from marketing approval, all of its requirements for the device and related accessories and (b) thereafter 80% and (ii) in the rest of the world, all of its requirements during the PARI Royalty Period. Pricing is on a per unit basis, with a reduction in price once purchasing volumes reach over 5,000 for devices and starter kits and over 40,000 for nebulizer handsets in a twelve month period.

GEMA Biotech S.A.

In December 2012, Serendex entered into a supply and license agreement related to supplying the API for Molgradex with GEMA Biotech S.A., which was subsequently amended by an addendum in February 2016 (the

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GEMA Agreement). Savara assumed the GEMA Agreement as part of the Serendex Acquisition. Under the GEMA Agreement, Savara has an exclusive license to market, distribute and sell products based on GEMA recombinant hGM-CSF for any disease to be treated by inhalation, local pulmonary administration, parenteral administration, or local administration of the API in any territory except Latin America, Central America and Mexico. Under the original GEMA Agreement, GEMA is the sole supplier of the API.

As consideration for the rights granted by GEMA, Savara is required to pay GEMA an agreed upon price per vial of 1 gram of the API. Additionally, if Savara successfully develops, registers and obtains approval by the proper health authorities, Savara must pay GEMA a single digit percentage royalty on annual net sales. There is no minimum royalty, and no signing fee or milestones are included in the royalty payments. Additionally, Savara has a commitment to acquire a working cell bank and a master cell bank for $1,950,000 from this API manufacturer in the third quarter of 2017.

Pursuant to the terms of the February 2016 addendum, GEMA granted an exclusive worldwide license to Serendex to transfer the manufacture of the API to Synco Bio Partners B.V., and agreed to sell the master cell bank and working cell bank to Serendex (now Savara). Upon the completion of the purchase by Savara of the master cell bank and working cell bank, the royalty payable to GEMA set forth above decreases.

Government Regulation

The FDA and other regulatory authorities at federal, state, and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring, and post-approval reporting of drugs, such as those Savara is developing. Savara, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which it wishes to conduct studies or seek approval or licensure of its product candidates. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local, and foreign statutes and regulations require the expenditure of substantial time and financial resources.

Government Regulation of Drugs

The process required by the FDA before drug product candidates may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA s current Good Laboratory Practices, or GLP, regulation;

- submission to the FDA of an IND, which must become effective before clinical trials may begin and must be updated annually or when significant changes are made;

- approval by an independent Institutional Review Board, or IRB, or ethics committee for each clinical site before a clinical trial can begin;

performance of adequate and well-controlled human clinical trials to establish the safety, purity and potency of the proposed product candidate for its intended purpose;

preparation of and submission to the FDA of a New Drug Application, or NDA, after completion of all required clinical trials;

a determination by the FDA within 60 days of its receipt of a NDA to file the application for review;

satisfactory completion of an FDA Advisory Committee review, if applicable;

satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with current Good Manufacturing

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Practices, or cGMP, and to assure that the facilities, methods and controls are adequate to preserve the product s continued safety, purity and potency, and of selected clinical investigational sites to assess compliance with current Good Clinical Practices, or cGCPs; and

FDA review and approval of the NDA to permit commercial marketing of the product for particular indications for use in the United States, which must be updated annually and when significant changes are made.

The testing and approval process requires substantial time, effort and financial resources, and Savara cannot be certain that any approvals for its product candidates will be granted on a timely basis, if at all. Prior to beginning the first clinical trial with a product candidate, Savara must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with cGCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent Institutional Review Board, or IRB, for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

For purposes of NDA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

Phase 1. The drug product is initially introduced into healthy human subjects and tested for safety. In the case of some products for severe or life-threatening diseases, the initial human testing is often conducted in patients.

Phase 2. The drug product is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.

Phase 3. Clinical trials are undertaken to further evaluate dosage, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk to benefit ratio of the product and provide an adequate basis for product labeling.

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Phase 4. In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may be required as a condition to approval of the NDA.

Phase 1, Phase 2 and Phase 3 testing may not be completed successfully within a specified period, if at all, and there can be no assurance that the data collected will support FDA approval or licensure of the product. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the drug characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

NDA Submission and Review by the FDA

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a NDA requesting approval to market the product for one or more indications. The NDA must include all relevant data available from pertinent preclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product s chemistry, manufacturing, controls, and proposed labeling, among other things. Data can come from company-sponsored clinical studies intended to test the safety and effectiveness of a use of the product, or from a number of alternative sources, including studies initiated by investigators. The submission of a NDA requires payment of a substantial User Fee to FDA, and the sponsor of an approved NDA is also subject to annual product and establishment user fees. These fees are typically increased annually. A waiver of user fees may be obtained under certain limited circumstances.

Within 60 days following submission of the application, the FDA reviews a NDA to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any NDA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the NDA must be resubmitted with the additional information. Once a NDA has been filed, the FDA s goal is to review the application within ten months after it accepts the application for filing, or, if the application relates to an unmet medical need in a serious or life-threatening indication, six months after the FDA accepts the application for filing. The review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews a NDA to determine, among other things, whether a product is safe and effective for the indication being pursued, and the facility in which it is manufactured, processed, packed, or held meets standards designed to assure the product s continued safety and effectiveness. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving a NDA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a NDA, the FDA will typically inspect one or more clinical sites to assure compliance with cGCP. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

The testing and approval process requires substantial time, effort and financial resources, and each may take several years to complete. The FDA may not grant approval on a timely basis, or at all, and Savara may encounter difficulties or unanticipated costs in its efforts to secure necessary governmental approvals, which could delay or preclude us from marketing its products. After the FDA evaluates a NDA and conducts

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inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete and the application is not ready for approval. A Complete Response Letter may request additional information or clarification. The FDA may delay or refuse approval of a NDA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the NDA with a Risk Evaluation and Mitigation Strategy, or REMS, plan to mitigate risks, which could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing regulatory standards is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product s safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies. In addition, new government requirements, including those resulting from new legislation, may be established, or the FDA s policies may change, which could delay or prevent regulatory approval of its products under development.

A sponsor may seek approval of its product candidate under programs designed to accelerate FDA s review and approval of new drugs that meet certain criteria. Specifically, new drug products are eligible for fast track designation if they are intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. For a fast track product, the FDA may consider sections of the NDA for review on a rolling basis before the complete application is submitted if relevant criteria are met. A fast track designated product candidate may also qualify for priority review, under which the FDA sets the target date for FDA action on the NDA at six months after the FDA accepts the application for filing. Priority review is granted when there is evidence that the proposed product would be a significant improvement in the safety or effectiveness of the treatment, diagnosis, or prevention of a serious condition. If criteria are not met for priority review, the application is subject to the standard FDA review period of 10 months after FDA accepts the application for filing. Priority review designation does not change the scientific/medical standard for approval or the quality of evidence necessary to support approval.

Under the accelerated approval program, the FDA may approve a NDA on the basis of either a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. Post-marketing studies or completion of ongoing studies after marketing approval are generally required to verify the biologic s clinical benefit in relationship to the surrogate endpoint or ultimate outcome in relationship to the clinical benefit. In addition, the Food and Drug Administration Safety and Innovation Act, or FDASIA, which was enacted and signed into law in 2012, established breakthrough therapy designation. A sponsor may seek FDA designation of its product candidate as a breakthrough therapy if the product candidate is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the therapy may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Sponsors may request the FDA to designate a breakthrough therapy at the time of or any time after the submission of an IND, but ideally before an end-of-phase 2 meeting with FDA. If the FDA designates a breakthrough therapy, it may take actions appropriate to expedite the development and review of the application,

which may include holding meetings with the sponsor and the review team throughout the development of the therapy; providing timely advice to, and interactive communication with, the sponsor regarding the development of the drug to ensure that the development program to gather the nonclinical

and clinical data necessary for approval is as efficient as practicable; involving senior managers and experienced review staff, as appropriate, in a collaborative, cross-disciplinary review; assigning a cross-disciplinary project lead for the FDA review team to facilitate an efficient review of the development program and to serve as a scientific liaison between the review team and the sponsor; and considering alternative clinical trial designs when scientifically appropriate, which may result in smaller or more efficient clinical trials that require less time to complete and may minimize the number of patients exposed to a potentially less efficacious treatment. Breakthrough designation also allows the sponsor to file sections of the NDA for review on a rolling basis. Savara may seek designation as a breakthrough therapy for some or all of its product candidates.

Fast Track designation, priority review and breakthrough therapy designation do not change the standards for approval but may expedite the development or approval process.

Orphan Drug Status

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drug candidates intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that costs of research and development of the drug for the indication can be recovered by sales of the drug in the United States. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Although there may be some increased communication opportunities, orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a drug candidate that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications, including a full NDA, to market the same drug for the same indication for seven years, except in very limited circumstances, such as if the second applicant demonstrates the clinical superiority of its product or if FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the NDA application user fee.

Orphan drug exclusivity could block the approval of Savara s drug candidates for seven years if a competitor obtains approval of the same product as defined by the FDA or if Savara s drug candidate is determined to be contained within the competitor s product for the same indication or disease.

As in the United States, designation as an orphan drug for the treatment of a specific indication in the European Union, must be made before the application for marketing authorization is made. Orphan drugs in Europe enjoy economic and marketing benefits, including up to 10 years of market exclusivity for the approved indication unless another applicant can show that its product is safer, more effective or otherwise clinically superior to the orphan designated product.

The FDA and foreign regulators expect holders of exclusivity for orphan drugs to assure the availability of sufficient quantities of their orphan drugs to meet the needs of patients. Failure to do so could result in the withdrawal of marketing exclusivity for the orphan drug.

GAIN Exclusivity for Antibiotics

In 2012, Congress passed legislation known as the Generating Antibiotic Incentives Now Act, or GAIN Act. This legislation is designed to encourage the development of antibacterial and antifungal drug products that treat

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pathogens that cause serious and life-threatening infections. To that end, the new law grants an additional five years of exclusivity upon the approval of an NDA for a drug product designated by FDA as a QIDP. Thus, for a QIDP with Orphan Designation, the periods of five-year exclusivity and seven-year orphan drug exclusivity, would become 12 years.

A QIDP is defined in the GAIN Act to mean an antibacterial or antifungal drug for human use intended to treat serious or life-threatening infections, including those caused by (1) an antibacterial or antifungal resistant pathogen, including novel or emerging infectious pathogens or (2) certain qualifying pathogens. A qualifying pathogen is a pathogen that has the potential to pose a serious threat to public health (such as resistant Gram-positive pathogens, multi-drug resistant Gram-negative bacteria, multi-drug resistant tuberculosis, and C. difficile) and that is included in a list established and maintained by FDA. A drug sponsor may request the FDA to designate its product as a QIDP any time before the submission of an NDA. The FDA must make a QIDP determination within 60 days of the designation request. A product designated as a QIDP will be granted priority review by the FDA and can qualify for fast track status.

The additional five years of exclusivity under the GAIN Act for drug products designated by the FDA as QIDPs applies only to a drug that is first approved on or after July 9, 2012. Additionally, the five year exclusivity extension does not apply to: a supplement to an application under FDCA Section 505(b) for any QIDP for which an extension is in effect or has expired; a subsequent application filed with respect to a product approved by the FDA for a change that results in a new indication, route of administration, dosing schedule, dosage form, delivery system, delivery device or strength; or a product that does not meet the definition of a QIDP under Section 505(g) based upon its approved uses.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual user fee requirements for any marketed products and the establishments at which such products are manufactured, as well as new application fees for supplemental applications with clinical data. Drug manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with GMP, which impose certain procedural and documentation requirements upon Savara and its third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon us and any third-party manufacturers that Savara may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance. Savara cannot be certain that it or its present or future suppliers will be able to comply with the cGMP regulations and other FDA regulatory requirements. If Savara s present or future suppliers are not able to comply with these requirements, the FDA may, among other things, halt its clinical trials, require them to recall a product from distribution, or withdraw approval of the NDA.

Future FDA and state inspections may identify compliance issues at Savara s facilities or at the facilities of its contract manufacturers that may disrupt production or distribution, or require substantial resources to correct. In addition, discovery of previously unknown problems with a product or the failure to comply with applicable requirements may result in restrictions on a product, manufacturer or holder of an approved NDA, including withdrawal or recall of the

product from the market or other voluntary, FDA-initiated or judicial action that could delay or prohibit further marketing.

The FDA may withdraw approval of an NDA if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown

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problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of drugs and biologics. A company can make only those claims relating to safety and efficacy that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product s labeling and that differ from those tested by Savara and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer s communications on the subject of off-label use of their products.

Government Regulation of Combination Products

Savara s products under development will be regulated as combination products, which means that they are comprised of two or more different components that, if marketed individually, would be subject to different regulatory paths and would require approval of independent marketing applications by the FDA. A combination product, however, is assigned to a Center with the FDA that will have primary jurisdiction over its regulation on a determination of the combination product s primary mode of action, which is the single mode of action that provides the most important therapeutic action. Savara believes its product candidates include both a drug and medical device component, and will be regulated as a drug, subject to the review of the FDA s Center for Drug Evaluation and Research, or CDER, which will have primary jurisdiction over premarket development and approval. FDA s Center for Devices and Radiological Health, or CDRH, will provide support and review of the inhaler component of the product candidate.

Other Healthcare Laws and Compliance Requirements

Savara s sales, promotion, medical education, clinical research and other activities following product approval will be subject to regulation by numerous regulatory and law enforcement authorities in the United States in addition to FDA, including potentially the Federal Trade Commission, the Department of Justice, the Centers for Medicare and Medicaid Services, or CMS, other divisions of the U.S. Department of Health and Human Services and state and local governments. Savara s promotional and scientific/educational programs and interactions with healthcare professionals must comply with the federal Anti-Kickback Statute, the civil False Claims Act, physician payment transparency laws, privacy laws, security laws, and additional federal and state laws similar to the foregoing.

The federal Anti-Kickback Statute prohibits, among other things, the knowing and willing, direct or indirect offer, receipt, solicitation or payment of remuneration in exchange for or to induce the referral of patients,

including the purchase, order or lease of any good, facility, item or service that would be paid for in whole or part by Medicare, Medicaid or other federal health care programs. Remuneration has been broadly defined to include anything of value, including cash, improper discounts, and free or reduced price items and services. The federal Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, formulary managers, and beneficiaries on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to increased scrutiny and review if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the federal Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all its facts and circumstances. Several courts have interpreted the statute s intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the federal Anti-Kickback Statute has been violated. The government has enforced the federal Anti-Kickback Statute to reach large settlements with healthcare companies based on sham research or consulting and other financial arrangements with physicians. Further, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act. Many states have similar laws that apply to their state health care programs as well as private payers.

Federal false claims and false statement laws, including the federal civil False Claims Act, or FCA, imposes liability on persons and/or entities that, among other things, knowingly present or cause to be presented claims that are false or fraudulent or not provided as claimed for payment or approval by a federal health care program. The FCA has been used to prosecute persons or entities that cause the submission of claims for payment that are inaccurate or fraudulent, by, for example, providing inaccurate billing or coding information to customers, promoting a product off-label, submitting claims for services not provided as claimed, or submitting claims for services that were provided but not medically necessary. Actions under the FCA may be brought by the Attorney General or as a qui tam action by a private individual, or whistleblower, in the name of the government. Violations of the FCA can result in significant monetary penalties and treble damages. The federal government is using the FCA, and the accompanying threat of significant liability, in its investigation and prosecution of pharmaceutical and biotechnology companies throughout the country, for example, in connection with the promotion of products for unapproved uses and other illegal sales and marketing practices. The government has obtained multi-million and multi-billion dollar settlements under the FCA in addition to individual criminal convictions under applicable criminal statutes. In addition, certain companies that were found to be in violation of the FCA have been forced to implement extensive corrective action plans, and have often become subject to consent decrees or corporate integrity agreements, restricting the manner in which they conduct their business.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payers; knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services; and willfully obstructing a criminal investigation of a healthcare offense. Like the federal Anti-Kickback Statute, the Affordable Care Act amended the intent standard for certain healthcare fraud statutes under HIPAA such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

Given the significant size of actual and potential settlements, it is expected that the government will continue to devote substantial resources to investigating healthcare providers and manufacturers compliance with applicable fraud and abuse laws. Also, many states have similar fraud and abuse statutes or regulations that may be broader in scope and may apply regardless of payer, in addition to items and services reimbursed under

Medicaid and other state programs. Additionally, to the extent that Savara s products, once commercialized, are sold in a foreign country, Savara may be subject to similar foreign laws.

In addition, there has been a recent trend of increased federal and state regulation of payments made to physicians and other healthcare providers. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the Affordable Care Act, among other things, imposed new reporting requirements on certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children s Health Insurance Program, with specific exceptions, for payments or other transfers of value made by them to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Covered manufacturers are required to collect and report detailed payment data and submit legal attestation to the accuracy of such data to the government each year. Failure to submit required information may result in civil monetary penalties of up to an aggregate of $150,000 per year (or up to an aggregate of $1 million per year for knowing failures), for all payments, transfers of value or ownership or investment interests that are not timely, accurately and completely reported in an annual submission. Additionally, entities that do not comply with mandatory reporting requirements may be subject to a corporate integrity agreement. Certain states also mandate implementation of commercial compliance programs, impose restrictions on covered manufacturers marketing practices and/or require the tracking and reporting of gifts, compensation and other remuneration to physicians and other healthcare professionals.

Savara may also be subject to data privacy and security regulation by both the federal government and the states in which it conducts its business. HIPAA, as amended by the Health Information Technology and Clinical Health Act, or HITECH, and their respective implementing regulations, imposes specified requirements on certain health care providers, plans and clearinghouses (collectively, covered entities) and their business associates, relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA s security standards directly applicable to business associates, defined as independent contractors or agents of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney s fees and costs associated with pursuing federal civil actions. In addition, certain states have their own laws that govern the privacy and security of health information in certain circumstances, many of which differ from each other and/or HIPAA in significant ways and may not have the same effect, thus complicating compliance efforts.

If Savara s operations are found to be in violation of any of such laws or any other governmental regulations that apply to them, Savara may be subject to penalties, including, without limitation, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of its operations, exclusion from participation in federal and state healthcare programs, imprisonment, contractual damages, reputational harm, and diminished profits and future earnings, any of which could adversely affect its ability to operate its business and its financial results.

In addition to the foregoing health care laws, Savara is also subject to the U.S. Foreign Corrupt Practices Act and similar worldwide anti-bribery laws, which generally prohibit companies and their intermediaries from making improper payments to government officials or private-sector recipients for the purpose of obtaining or retaining business. Savara has plans to adopt an anti-corruption policy, which will become effective upon the completion of this offering, and expect to prepare and implement procedures to ensure compliance with such policy. The anti-corruption policy mandates compliance with the FCPA and similar anti-bribery laws applicable to its business throughout the world. However, Savara cannot assure you that such a policy or procedures implemented to enforce such a policy will protect them from intentional, reckless or negligent acts committed by its employees, distributors, partners, collaborators or agents. Violations of these laws, or allegations of such violations, could result in fines, penalties or

prosecution and have a negative impact on its business, results of operations and reputation.

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Coverage and Reimbursement

Sales of pharmaceutical products depend significantly on the extent to which coverage and adequate reimbursement are provided by third-party payers. Third-party payers include state and federal government health care programs, managed care providers, private health insurers and other organizations. Although Savara currently believes that third-party payers will provide coverage and reimbursement for its product candidates, if approved, Savara cannot be certain of this. Third-party payers are increasingly challenging the price, examining the cost-effectiveness, and reducing reimbursement for medical products and services. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. The U.S. government, state legislatures and foreign governments have continued implementing cost containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit Savara s net revenue and results. Savara may need to conduct expensive clinical studies to demonstrate the comparative cost-effectiveness of its products. The product candidates that Savara develops may not be considered cost-effective and thus may not be covered or sufficiently reimbursed. It is time consuming and expensive for them to seek coverage and reimbursement from third-party payers, as each payer will make its own determination as to whether to cover a product and at what level of reimbursement. Thus, one payer s decision to provide coverage and adequate reimbursement for a product does not assure that another payer will provide coverage or that the reimbursement levels will be adequate. Moreover, a payer s decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Reimbursement may not be available or sufficient to allow them to sell its products on a competitive and profitable basis.

Healthcare Reform

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change the healthcare system in ways that could materially affect Savara s ability to sell its products profitably. Among policy makers and payers in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

By way of example, in March 2010, the Affordable Care Act was signed into law, intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. Among the provisions of the Affordable Care Act of importance to Savara s potential drug candidates are:

- an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;

- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13.0% of the average manufacturer price for branded and generic drugs, respectively;

a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;

a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for a manufacturer s outpatient drugs to be covered under Medicare Part D;

extension of a manufacturer s Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;

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expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for certain individuals with income at or below 133% of the federal poverty level, thereby potentially increasing a manufacturer s Medicaid rebate liability;

expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program; and

a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. These changes include, among others, the Budget Control Act of 2011, which mandates aggregate reductions to Medicare payments to providers of up to 2% per fiscal year effective April 1, 2013, and, due to subsequent legislative amendments, will remain in effect through 2024 unless additional Congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for Savara s product candidates, if approved, and, accordingly, its financial operations.

Savara expects that healthcare reform measures that may be adopted in the future, including the possible repeal and replacement of the Affordable Care Act which the Trump administration has stated is a priority, are unpredictable, and the potential impact on Savara s operations and financial position are uncertain, but may result in more rigorous coverage criteria and lower reimbursement, and place additional downward pressure on the price that it receives for any approved product. Any reduction in reimbursement from Medicare or other government-funded programs may result in a similar reduction in payments from private payers. The implementation of cost containment measures or other healthcare reforms may prevent Savara from being able to generate revenue, attain profitability or commercialize their drugs.

Foreign Regulation

In addition to regulations in the United States, Savara will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of its products to the extent Savara chooses to develop or sell any products outside of the United States. The approval process varies from country to country and the time may be longer or shorter than that required to obtain FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Intellectual Property

Savara strives to protect the proprietary technology that Savara believes is important to its business, including its product candidates and its processes. Savara seeks patent protection in the United States and internationally for its products, their methods of use and processes of manufacture and any other technology to which Savara has rights, as appropriate. Savara also relies on trade secrets that may be important to the development of its business.

Savara owns five issued patents and additional pending patent applications worldwide for a proprietary formulation of AeroVanc. The patents and pending applications are derived from a PCT application (Pub. No. WO2012159103)

entitled Dry Powder Vancomycin Compositions and Associated Methods. As of January 31, 2017, patents have issued in Australia, China, Japan, New Zealand, and Singapore. Additionally, Savara recently received a Notice of Allowance in the United States, the primary market for AeroVanc.

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While Savara does not have any issued patents or pending applications covering Molgradex or its use in pulmonary alveolar proteinosis (PAP), Savara does own a family of issued patents and pending applications derived from a PCT application (Pub. No. WO2008052567) entitled Enhancing Pulmonary Host Defense via Administration of Granulocyte-Macrophage Colony-Stimulating Factor covering inhaled GM-CSF for treatment of bacterial, mycobacterial (including Mycobacterium tuberculosis and non-tuberculous Mycobacterium), yeast, and virus infections in the lungs. Patents have been granted in Japan, Australia, and Mexico. Patent applications are currently pending in several other countries, including the United States. An application is also pending in the European Union, where an allowance has been indicated.

Savara s success will in part depend on the ability to obtain and maintain patent and other proprietary rights in commercially important technology, inventions and know-how related to its business, the validity and enforceability of its patents, the continued confidentiality of its trade secrets as well as its ability to operate without infringing the valid and enforceable patents and proprietary rights of third parties. Savara also relies on continuing technological innovation and in-licensing opportunities to develop and maintain its proprietary position.

Savara cannot be sure that patents will be granted with respect to any of its pending patent applications or with respect to any patent applications it may own or license in the future, nor can Savara be sure that any of its existing patents or any patents it may own or license in the future will be useful in protecting its technology and products. For this and more comprehensive risks related to Savara s intellectual property, please see Risk Factors Risks Related to Savara s Intellectual Property.

Trade Secrets

In addition to patents, Savara relies on trade secrets and know-how to develop and maintain its competitive position. For example, significant aspects of Savara s processes and proprietary technology portfolio are based on unpatented trade secrets and know-how. Trade secrets and know-how can be difficult to protect. Savara seeks to protect its proprietary technology and processes, in part, by confidentiality agreements and invention assignment agreements with its employees, consultants, scientific advisors, contractors and commercial partners. These agreements are designed to protect the proprietary information and, in the case of the invention assignment agreements, to grant the company ownership of technologies that are developed through a relationship with a third party. While Savara has confidence in its key individuals, consultants, partner organizations and systems, agreements or security measures may be breached, and there may not be adequate remedies for any breach. In addition, Savara s trade secrets may otherwise become known or be independently discovered by competitors. To the extent that Savara s contractors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Competition

The pharmaceutical industry is highly competitive and subject to continuous technological change. Savara s potential competitors include large pharmaceutical and biotechnology companies, specialty pharmaceutical and generic drug companies, academic institutions, government agencies and research institutions. Savara believes that key competitive factors affecting the commercial success of its product candidates will be efficacy, safety and tolerability profile, reliability, convenience of dosing, price and reimbursement. Many of Savara s potential competitors, either alone or with their collaboration partners have substantially greater financial, technical and human resources than Savara, and significantly greater experience in the discovery and development of product candidates, manufacturing, obtaining FDA and other regulatory approvals of products and the commercialization of those products. Accordingly, Savara s competitors may be faster and more successful in obtaining FDA approval for therapies and achieving widespread market acceptance. Mergers and acquisitions in the pharmaceutical and biotechnology industry may result in even

more resources being concentrated among a smaller number of very capable competitors. Savara anticipates facing intense and increasing competition as new drugs enter the market and advanced technologies become available. Savara s competitors products may be

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more effective, or more effectively marketed and sold, than any product candidate Savara may commercialize and may render Savara s therapies obsolete or non-competitive before Savara can recover development and commercialization expenses.

Savara is not aware of any other companies developing inhaled forms of vancomycin. There are several inhaled antibiotics on the market or in development, but Savara is not aware of any other inhaled antibiotic product that would be specifically developed for the treatment of MRSA infection. Certain inhaled antibiotics in development, including levofloxacin, and ciprofloxacin inhalation formulations, may possess some level of *in vitro* or *in vivo* activity against MRSA, even though the compounds are not generally considered MRSA-antibiotics. It is therefore possible that such products, if approved, may present a competitive threat to AeroVanc. A combination product containing fosfomycin and tobramycin for inhalation (FTI) was developed by Gilead Sciences (Foster City, CA), and shown in a Phase 2 study to possess activity against Gram-negative and Gram-positive bacteria, including MRSA. Gilead terminated the development of the product, and licensed it to CURx Pharmaceuticals (San Diego, CA) in February, 2014. No clinical studies on FTI have been initiated by CURx. If FTI is developed, and approved, for the treatment of MRSA lung infection in CF, Savara believes it has the potential to present a competitive threat to the commercial success of AeroVanc.

Many small and large pharmaceutical companies have intravenously or orally administered MRSA-antibiotics on the market, and/or in development. Whereas such antibiotics are important in the treatment of many acute and chronic MRSA-infections, such as skin and soft tissue infections, pneumonia, or endocarditis, Savara does not believe these products are practical or sufficiently efficacious and/or safe for long-term management of chronic MRSA lung infection in CF patients. Therefore, Savara does not believe these products and product candidates are a material competitive threat to the commercial success of AeroVanc.

Savara is not aware of any other companies developing an inhaled form of GM-CSF. A glycosylated GM-CSF product, sargramostim (Leukine, Sanofi), is available on the market in the United States, intended for IV or subcutaneous delivery in patients with neutropenia following cancer chemotherapy. Leukine has not been approved, and according to Savara s knowledge, is not being developed for the treatment of PAP or any other acute or chronic lung disease. The drug substance in Leukine, sargramostim, has been used in a nonclinical research project conducted by NIH/TRND in collaboration with the University of Cincinnati College of Medicine on the potential application of inhaled GM-CSF as a treatment for PAP. No clinical studies have been conducted to date under this collaboration project. Savara is aware of a multicenter clinical study of inhaled Leukine, using a standard commercially available nebulizer, which is currently ongoing in Japan, conducted by a consortium of independent clinical investigators. It is not known to Savara if this study, together with other possibly available related clinical or nonclinical information, may be, or will be, used to support a potential new product approval in Japan. If such a new product would be approved and launched in Japan, Savara believes it has the potential to present a material competitive threat to the commercial success of Molgradex in Japan.

Asset Purchase Agreement with Serendex A/S

On May 13, 2016, Savara entered into a Business Transfer Agreement with Serendex A/S (subsequently named to Serenova) under which Serendex agreed to sell, transfer and assign to Savara all of its assets and subsidiaries, certain of its contracts, and certain of its employees and liabilities (Serendex Acquisition). Serendex was a limited liability company incorporated in Denmark and was listed on the Oslo Stock Exchange until May 4, 2016. On July 15, 2016, Savara completed the Serendex Acquisition through its wholly-owned subsidiary, Savara ApS, a limited liability company established under the laws of Denmark.

The Serendex Acquisition was an important step in fulfilling Savara s vision to become a specialty pharmaceutical company focused on rare respiratory diseases. Serendex was a biopharmaceutical development company advancing a pipeline and portfolio of novel inhalation therapies for the treatment of severe pulmonary conditions. Through the Serendex Acquisition, Savara gained access to the late-stage Molgradex program for the

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treatment of PAP, with a Phase 2/3 clinical study (IMPALA study) ongoing in EU and Japan. In addition to Molgradex, Savara gained access to an experienced development team familiar with all aspects of the Molgradex program.

As the purchase consideration, Savara agreed to provide the seller with 3,353,925 shares of Savara s common stock representing approximately 17.1% of the total outstanding common stock of Savara at the time of purchase. In addition to these purchase consideration shares, Savara agreed to pay the seller (i) $5,000,000 upon receipt of marketing approval of Molgradex for the treatment of PAP (the Product) by the European Medicines Agency, (ii) $15,000,000 upon receipt of marketing approval of the Product by the United States Food and Drug Administration, and (iii) $1,500,000 upon receipt of marketing approval of the Product by the Japanese Pharmaceuticals and Medical Devices Agency (the Contingent Milestone Payments).

Employees

As of December 31, 2016, Savara had 15 full-time employees, as well as several full-time or part time consultants. None of Savara s employees are represented by a labor union or covered by a collective bargaining agreement. Savara considers its relationship with its employees to be good.

Facilities

Savara s corporate headquarters is located in Austin, Texas, where the company leases approximately 2,800 square feet of office space pursuant to a lease that expires in 2019.

Savara believes that its existing facilities are adequate for its near-term needs. When the lease expires, Savara may look for alternate space for its operations. Savara believes that suitable alternative space would be available if required in the future on commercially reasonable terms.

Legal Proceedings

Savara is not currently a party to any material legal proceedings.

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MAST MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of the financial condition and results of operations of Mast should be read in conjunction with the condensed consolidated financial statements and accompanying notes appearing elsewhere in this proxy statement/prospectus/information statement. For additional context with which to understand the financial condition and results of operations of Mast, see the discussion and analysis included in Part II, Item 7 of Mast s annual report on Form 10-K for the year ended December 31, 2015, filed with the U.S. Securities and Exchange Commission, or SEC, on March 14, 2016, as well as the consolidated financial statements and accompanying notes contained therein. In addition to historical information, this discussion and analysis contains forward-looking statements that involve risks, uncertainties, and assumptions. The discussion of the Mast financial condition and results of operations contains certain statements that are not strictly historical and are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and involve a high degree of risk and uncertainty. Actual results may differ materially from those projected in the forward-looking statements due to other risks and uncertainties that exist in the Mast operations, development efforts and business environment, including those set forth in the section entitled Risk Factors Risks Related to Mast in this proxy statement/prospectus/information statement, the other risks and uncertainties described in the section entitled Risk Factors in this proxy statement/prospectus/information statement and the other risks and uncertainties described elsewhere in this proxy statement/prospectus/information statement. All forward-looking statements included in this proxy statement/prospectus/information statement are based on information available to Mast as of the date hereof, and Mast assumes no obligation to update any such forward-looking statement. Mast Therapeutics, Mast s corporate logo, Aires Pharmaceuticals, Inc., VOICE Crisis Alert, and SynthRx are trademarks of Mast. All trademarks, service marks or trade names appearing in this proxy statement/prospectus/information statement are the property of their respective owners. Use or display by Mast of other parties trademarks, service marks or trade names is not intended to and does not imply a relationship with, or endorsements or sponsorship of, Mast by the trademark, service mark or trade name owners.

Overview

Mast is a biopharmaceutical company developing clinical-stage therapies for serious or life-threatening diseases with significant unmet needs. Mast s lead product candidate, AIR001, a sodium nitrite solution for inhalation via nebulization, has demonstrated positive hemodynamic benefits in patients with heart failure with preserved ejection fraction, or HFpEF, and pulmonary hypertension, and currently is in clinical development for HFpEF. Three Phase 2 studies of AIR001 in patients with HFpEF are being conducted by prestigious research institutions. Positive interim results from one of those studies were published in November 2016. Results from another of the studies, a 100-patient, randomized, double-blind, placebo-controlled crossover study being conducted by the Heart Failure Clinical Research Network, are expected in the first quarter of 2018.

Mast s second product candidate, vepoloxamer (also known as MST-188), is currently in a nonclinical study that is being funded by a grant from the National Institutes of Health to evaluate vepoloxamer s potential therapeutic use in ischemic stroke. Vepoloxamer was previously in clinical development in sickle cell disease and heart failure, but following negative top-line results of the Phase 3 study in sickle cell disease known as EPIC in September 2016, Mast determined to discontinue the clinical development of vepoloxamer and wind down all of the clinical studies. Vepoloxamer has demonstrated multiple pharmacologic effects that may provide clinical benefit in a wide range of diseases and conditions typically characterized by impaired microvascular blood flow and/or damaged cell membranes, but Mast has limited its development of vepoloxamer to the grant-funded nonclinical study in ischemic stroke while it explores opportunities to monetize its vepoloxamer-related assets in order to focus its resources on

AIR001 s development.

Mast has devoted substantially all of its resources to research and development, or R&D, and to acquisition of its product candidates. Mast has not yet marketed or sold any products or generated any significant revenue

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and Mast has incurred significant annual operating losses since inception. Mast incurred a loss from operations of $28.2 million for the nine months ended September 30, 2016. As of September 30, 2016, Mast had an accumulated deficit of $305.0 million. Mast s cash, cash equivalents, and investment securities were $27.0 million and its working capital was $7.4 million as of September 30, 2016.

As discussed below under Management Outlook, the management of Mast does not believe Mast s cash, cash equivalents and investment securities as of September 30, 2016 will be sufficient to fund its currently planned operations for the next 12 months and its ability to raise additional capital as needed is uncertain. These circumstances raise substantial doubt about Mast s ability to continue as a going concern. Mast s financial statements do not include any adjustments to the amounts and classification of assets and liabilities that may be necessary should Mast be unable to continue as a going concern. Mast s ability to continue as a going concern depends on its ability to manage its operating costs and raise additional capital to fund continued development of its product candidates and ongoing operations. Mast estimates that its existing capital resources will be sufficient to fund its operations into the second quarter of 2017. Significant funds will be needed for Mast to continue to execute on its business strategy and advance its AIR001 program. Mast has implemented cost-saving measures to significantly reduce its operating costs, including the wind-down of all vepoloxamer clinical development activities and an approximately 70% reduction in its workforce, and, in addition to the Merger, Mast is exploring opportunities to strategically monetize its vepoloxamer-related assets, including through sale and licensing transactions. However, there can be no assurance Mast will be successful in these efforts.

Critical Accounting Policies and Significant Judgments and Estimates

The discussion and analysis of the financial condition and results of operations of Mast included in this proxy statement/prospectus/information statement is based upon consolidated financial statements and condensed consolidated financial statements that Mast has prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. The preparation of these financial statements requires Mast to make a number of estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses in these financial statements and accompanying notes. On an ongoing basis, Mast evaluates these estimates and assumptions, including those related to determination of the fair value of goodwill and acquired in-process research and development, or IPR&D, and recognition of R&D expenses and share-based compensation. Mast bases its estimates on historical information, when available, and assumptions believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities not readily apparent from other sources. Actual results may differ materially from these estimates under different assumptions or conditions.

Mast believes the following accounting estimates are those that can have a material impact on the financial condition or operating performance of Mast and involve substantial subjectivity and judgment in the application of Mast s accounting policies to account for highly uncertain matters or the susceptibility of such matters to change. The following is not intended to be a comprehensive discussion of all of its significant accounting policies. See the notes accompanying the consolidated financial statements of Mast appearing in the most recent annual report on Form 10-K of Mast for a summary of all of Mast s significant accounting policies and other disclosures required by U.S. GAAP.

Accrued Research and Development Expenses. As part of the process of preparing its financial statements, Mast is required to estimate its accrued expenses. This process involves reviewing open contracts and purchase orders, communicating with its personnel to identify services that have been performed on Mast s behalf and estimating the level of service performed and the associated cost incurred for the service when Mast has not yet been invoiced or otherwise notified of the actual cost. Many of its service providers invoice Mast monthly in arrears for services performed or when contractual milestones are met. Mast makes estimates of its accrued expenses as of each balance sheet date in its financial statements based on facts and circumstances known to

Mast at that time. Mast periodically confirms the accuracy of its estimates with the service providers and makes adjustments, if necessary. The majority of Mast s accrued expenses relate to R&D services and related expenses. Examples of estimated accrued R&D expenses include:

- fees paid to contract research organizations, or CROs, in connection with clinical studies;
- fees paid to investigative sites and investigators in connection with clinical studies;
- fees paid to contract manufacturing organizations, or CMOs, in connection with process development activities and production of nonclinical and clinical trial material;
- fees paid to vendors in connection with nonclinical development activities; and
- fees paid to consultants for regulatory-related advisory and data management services.

Mast bases its accrued expenses related to CROs and CMOs on its estimates of the services received and efforts expended pursuant to purchase orders or contracts with multiple service providers that Mast engages to conduct and manage its clinical studies and manufacture its clinical trial material on Mast s behalf. The financial terms of its arrangements with its CROs and CMOs are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful completion of specified process development activities or the successful enrollment of patients and the completion of clinical study milestones. In accruing these service fees, Mast estimates, as applicable, the time period over which services will be performed (e.g., enrollment of patients, activation of clinical sites, etc.). If the actual timing varies from Mast s estimate, Mast adjusts the accrual accordingly. In addition, there may be instances in which payments made to service providers will exceed the level of services provided and result in a prepayment of R&D expense, which Mast reports as an asset. The actual costs and timing of clinical studies and research-related manufacturing are uncertain and subject to change depending on a number of factors. Differences between actual costs of these services and the estimated costs that Mast has accrued in a prior period are recorded in the subsequent period in which the actual costs become known to Mast. Historically, these differences have not resulted in material adjustments, but such differences may occur in the future and have a material impact on the consolidated results of operations or financial position of Mast.

Business Combinations. Mast accounts for business combinations, such as its acquisitions of SynthRx in April 2011 and Aires Pharmaceuticals in February 2014, in accordance with Accounting Standards Codification, or ASC, Topic 805, *Business Combinations*, which requires the purchase price to be measured at fair value. When the purchase consideration consists entirely of shares of Mast s common stock, Mast calculates the purchase price by determining the fair value, as of the acquisition date, of shares issued in connection with the closing of the acquisition and, if the transaction involves contingent consideration based on achievement of milestones or earn-out events, the probability-weighted fair value, as of the acquisition date, of shares issuable upon the occurrence of future events or conditions pursuant to the terms of the agreement governing the business combination. If the transaction involves such contingent consideration, Mast s calculation of the purchase price involves probability inputs that are highly judgmental due to the inherent unpredictability of drug development, particularly by development-stage companies such as Mast. Mast recognizes estimated fair values of the tangible assets and intangible assets acquired, including

IPR&D, and liabilities assumed as of the acquisition date, and Mast records as goodwill any amount of the fair value of the tangible and intangible assets acquired and liabilities assumed in excess of the purchase price.

Goodwill and Acquired IPR&D. In accordance with ASC Topic 350, *Intangibles Goodwill and Other*, or ASC Topic 350, the goodwill and acquired IPR&D of Mast are determined to have indefinite lives and, therefore, are not amortized. Instead, they are tested for impairment annually and between annual tests if Mast becomes aware of an event or a change in circumstances that would indicate the carrying value may be impaired. Mast performs its annual impairment testing as of September 30 of each year, or, in the case of initially acquired IPR&D, on the first anniversary of the date Mast acquired it and subsequently on September 30. Pursuant to Accounting Standards Update, or ASU, No. 2011-08, *Intangibles Goodwill and Other (Topic 350): Testing*

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Goodwill for Impairment, and No. 2012-02, *Intangibles Goodwill and Other (Topic 350): Testing Indefinite-Lived Intangible Assets for Impairment*, Mast has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads Mast to determine that it is more likely than not (that is, a likelihood of more than 50%) that the goodwill or the acquired IPR&D of Mast is impaired. If Mast chooses to first assess qualitative factors and Mast determines that it is not more likely than not that goodwill or acquired IPR&D is impaired, Mast is not required to take further action to test for impairment. Mast also has the option to bypass the qualitative assessment and perform only the quantitative impairment test, which it may choose to do in some periods but not in others.

If Mast performs a quantitative assessment of goodwill, it utilizes the two-step approach prescribed under ASC Topic 350. Step 1 requires a comparison of the carrying value of a reporting unit, including goodwill, to its estimated fair value. Mast tests for impairment at the entity level because it operates on the basis of a single reporting unit. If the carrying value exceeds the fair value, Mast then performs Step 2 to measure the amount of impairment loss, if any. In Step 2, Mast estimates the fair value of its individual assets, including identifiable intangible assets, and liabilities to determine the implied fair value of goodwill. Mast then compares the carrying value of its goodwill to its implied fair value. The excess of the carrying value of goodwill over its implied fair value, if any, is recorded as an impairment charge.

If Mast performs a quantitative assessment of IPR&D, it calculates the estimated fair value of acquired IPR&D by using the Multi-Period Excess Earnings Method, or MPEEM, which is a form of the income approach. Under the MPEEM, the fair value of an intangible asset is equal to the present value of the asset s projected incremental after-tax cash flows (excess earnings) remaining after deducting the market rates of return on the estimated value of contributory assets (contributory charge) over its remaining useful life.

Mast s determinations as to whether, and, if so, the extent to which, goodwill and acquired IPR&D become impaired are highly judgmental and based on significant assumptions regarding Mast s projected future financial condition and operating results, changes in the manner of Mast s use of the acquired assets, development of Mast s acquired assets or its overall business strategy, and regulatory, market and economic environment and trends.

Share-based Compensation Expenses. Mast accounts for share-based compensation awards granted to employees, including non-employee members of the Mast Board, in accordance with ASC Topic 718, *Compensation Stock Compensation*. Compensation expense for all share-based awards is based on the estimated fair value of the award on its date of grant and recognized on a straight-line basis over its vesting period. As share-based compensation expense is based on awards ultimately expected to vest, it is reduced for estimated forfeitures. Mast estimates forfeitures at the time of grant based on the expected forfeiture rate for Mast s unvested stock options, which is based in large part on its historical forfeiture rates, but also on assumptions believed to be reasonable under the circumstances. Mast revises its estimates in subsequent periods if actual forfeitures differ from those estimates. Although share-based compensation expense can be significant to its consolidated financial statements, it does not involve the payment of any cash by Mast.

Mast estimates the grant date fair value of a stock option award using the Black-Scholes option-pricing model, or Black-Scholes model. In determining the grant date fair value of a stock option award under the Black-Scholes model, Mast must make a number of assumptions, including the term of the award, the volatility of the price of Mast s common stock over the term of the award, and the risk-free interest rate. Changes in these or other assumptions could have a material impact on the compensation expense Mast recognizes.

Results of Operations Overview

Mast operates its business and evaluates its company on the basis of a single reportable segment, which is the business of developing therapies for serious or life-threatening diseases.

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Revenue

Mast has not generated any revenue from product sales to date, and it does not expect to generate revenue from product sales until at least such time, if any, that Mast obtains approval from a regulatory agency to sell one or more of its product candidates, which Mast cannot predict with certainty will occur. If Mast enters into any licensing or other collaborative arrangements regarding its development programs, Mast may recognize revenue from those arrangements prior to commercial sale of any products.

Mast recognizes revenues from federal government research grants during the period in which it receives the grant funds, or their collection is reasonably assured, and Mast incurs the qualified expenditures. The expenditures are reflected as a component of R&D expense in the Statements of Operations.

Operating Expenses

Research and Development Expenses. Mast maintains and evaluates its R&D expenses by the type of cost incurred rather than by project. Mast dose this primarily because it outsources a substantial portion of its work and its R&D personnel and consultants work across multiple programs rather than dedicating their time to one particular program. Mast categorizes its R&D expenses as external clinical study fees and expenses, external nonclinical study fees and expenses, personnel costs and share-based compensation expense. The major components of Mast s external clinical study fees and expenses are fees and expenses related to CROs and clinical study investigative sites and investigators. The major components of Mast s external nonclinical study fees and expenses have historically been fees and expenses related to preclinical studies and other nonclinical testing, research-related manufacturing, quality assurance and regulatory affairs services, and preparation of a new drug application, or NDA, for vepoloxamer. Research-related manufacturing expenses include costs associated with producing and/or purchasing active pharmaceutical ingredient (API), conducting process development activities, producing clinical trial material, producing material for stability testing to support regulatory filings, related labeling, testing and release, packaging and storing services, related consulting fees, and costs related to purchasing nebulizers for administration of AIR001. Impairment losses on R&D-related manufacturing equipment are also considered research-related manufacturing expenses. Personnel costs relate to employee salaries, benefits and related costs.

A general understanding of drug development is critical to understanding Mast s results of operations and, particularly, its R&D expenses. Drug development in the United States and most countries throughout the world is a process that includes several steps defined by the U.S. Food and Drug Administration, or FDA, and similar regulatory authorities in foreign countries. The FDA approval processes relating to new drug products differ depending on the nature of the particular product candidate for which approval is sought. With respect to any product candidate with active ingredients not previously approved by the FDA, a prospective drug product manufacturer is required to submit a NDA that includes complete reports of pre-clinical, clinical and laboratory studies and extensive manufacturing information to demonstrate the product candidate s safety and effectiveness. Generally, an NDA must be supported by at least phase 1, 2 and 3 clinical studies, with each study typically more expensive and lengthy than the previous study.

Future expenditures on R&D programs are subject to many uncertainties, including the number of clinical studies required to be conducted for each development program and whether Mast will develop a product candidate with a partner or independently. At this time, due to such uncertainties and the risks inherent in drug product development and the associated regulatory process, Mast cannot estimate with any reasonable certainty the duration of or costs to complete its R&D programs, or whether or when or to what extent revenues will be generated from the commercialization and sale of any of its product candidates. The duration and costs of Mast s R&D programs, in particular, the duration and costs associated with clinical studies and research-related manufacturing, can vary

significantly as a result of a variety of factors, including:

- the number of clinical and nonclinical studies necessary to demonstrate the safety and efficacy of a product candidate in a particular indication;

- the number of patients who participate in each clinical study;

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the number and location of sites included and the rate of site approval in each clinical study;

the rate of patient enrollment and ratio of randomized to evaluable patients in each clinical study;

the duration of patient treatment and follow-up;

the potential additional safety monitoring or other studies requested by regulatory agencies;

the time and cost to manufacture clinical trial material and commercial product, including process development and scale-up activities, and to conduct stability studies, which can last several years;

the availability and cost of comparative agents used in clinical studies;

the timing and terms of any collaborative or other strategic arrangements that Mast may establish; and

the cost, requirements, timing of and the ability to secure regulatory approvals.

Mast regularly evaluates the prospects of its R&D programs, including in response to available scientific, nonclinical and clinical data, Mast s assessments of a product candidate s market potential and Mast s available resources, and make determinations as to which programs to pursue and how much funding to direct to each one.

As a result of cost-saving measures Mast has begun implementing, Mast expects its annual R&D expenses (excluding share-based compensation expense) will be approximately 15% less in 2016 compared to 2015. This decrease would be due primarily to the discontinuation of development of vepoloxamer in sickle cell disease and heart failure.

Selling, General and Administrative Expenses. Selling, general and administrative, or SG&A, expenses consist primarily of salaries, benefits and related costs for personnel in executive, finance and accounting, legal and marketing functions, and professional and consulting fees for accounting, legal, investor relations, business development, commercial strategy and research, human resources and information technology services. Other SG&A expenses include facility lease and insurance costs and in-licensing costs for third-party intellectual property, if any.

As a result of cost-saving measures it began implementing, Mast expects its annual SG&A expenses (excluding share-based compensation expense) to be approximately 10% less in 2016 compared to 2015. This decrease would be due primarily to less investment than previously anticipated in external costs related to commercial-readiness activities for vepoloxamer in sickle cell disease.

Interest Income. Interest income includes interest earned on Mast s cash, cash equivalent and investment security balances.

Interest Expense. Interest expense consists of interest payments made and interest expense related to debt issuance costs and debt discount under Mast s debt facility and interest expense associated with payments under capital leases of equipment.

Other (Expense)/Income, Net. Other (expense)/income, net includes unrealized and realized gains and losses from foreign currency transactions and other non-operating gains and losses.

Results of Operations Comparison of Nine Months Ended September 30, 2016 and 2015

Revenue. Mast recognized $45,000 of revenue for the nine months ended September 30, 2016. The revenue represents reimbursement of costs related to the nonclinical study of vepoloxamer that is being funded by a grant from the National Institute of Neurological Disorders and Stroke of the NIH. Mast recognized no revenue for the nine months ended September 30, 2015.

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R&D Expenses. Mast s most significant R&D expenses for the nine months ended September 30, 2016 were external costs associated with the EPIC study, research-related manufacturing for vepoloxamer, Mast s Phase 2 study of vepoloxamer in heart failure and preparing a NDA for vepoloxamer. These expenses consisted primarily of CRO and CMO expenses, clinical study and regulatory-related consulting expenses, and study site expenses, which include start-up costs as well as patient costs. The following table summarizes Mast s consolidated R&D expenses by type for each of the periods listed and their respective percent of Mast s total R&D expenses for such periods (in thousands, except for percentages):

	Nine Months Ended September 30,			
	2016	**%**	**2015**	**%**
External clinical study fees and expenses	$ 11,150	54%	$ 10,573	50%
External nonclinical study fees and expenses	5,960	29%	7,177	34%
Personnel costs	2,927	14%	2,921	14%
Share-based compensation expense	678	3%	435	2%
Total	$ 20,715	100%	$ 21,106	100%

R&D expenses decreased by $0.4 million, or approximately 1.8%, to $20.7 million for the nine months ended September 30, 2016, compared to $21.1 million for the same period in 2015. This decrease was primarily due to a decrease of $1.2 million in external nonclinical study fees and expenses, which was 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 of $2.1 million in research-related manufacturing costs for vepoloxamer and $1.0 million in costs for nonclinical studies of vepoloxamer, offset by increases of $1.8 million in external costs related to preparing a NDA for vepoloxamer and $0.1 million in research-related manufacturing costs for AIR001. The $0.6 million increase in external clinical study fees and expenses was due primarily to an increase of $1.4 million in costs for the Phase 2 study of vepoloxamer in heart failure and an increase of $0.7 million in costs for the Phase 2 studies of AIR001 in HFpEF, offset by a net decrease of $0.9 million in costs associated with clinical studies of vepoloxamer for its development in sickle cell disease and a decrease of $0.5 million in costs for the Phase 2 study of vepoloxamer in ALI.

SG&A Expenses. SG&A expenses decreased by $1.0 million, or approximately 12.3%, to $7.4 million for the nine months ended September 30, 2016, compared to $8.4 million for the same period in 2015. SG&A expenses in the nine months ended September 30, 2015 included $0.4 million of severance expenses and $0.3 million of share-based compensation expense resulting from the termination of employment of Mast s former president and chief operating officer in February 2015 and the acceleration of stock option vesting pursuant to the terms of his option agreements. Additionally, fees for consulting and legal services for the nine months ended September 30, 2016 were $0.2 million less than for the same period in 2015.

Interest Expense. Interest expense for the nine months ended September 30, 2016 was $2.0 million 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 Mast s 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 $10.0 million of the principal balance in October 2016.

Net Loss. Net loss was $30.1 million, or $0.15 per share, for the nine months ended September 30, 2016, compared to net loss of $29.7 million, or $0.18 per share, for the same period in 2015.

Results of Operations Comparison of 2015 and 2014

Revenue. Mast recognized no revenue for the years ended December 31, 2015 and 2014.

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Operating Expenses. The following table illustrates the types of operating expenses Mast incurred in 2015 and 2014 and their respective percent of its total operating costs for those periods:

	Operating Expenses Years Ended	
	2015	**2014**
Research and development	72%	66%
Selling, general and administrative	28%	33%
Transaction-related expenses	0%	1%
Depreciation and amortization	0%	0%
Total operating expenses	100%	100%

R&D Expenses. In 2015, Mast s most significant R&D expenses were external costs associated with the EPIC study, its Phase 2 studies of vepoloxamer in ALI, which Mast discontinued in the third quarter of 2015, and heart failure, which is ongoing, and research-related manufacturing for vepoloxamer and AIR001. These expenses consisted primarily of CRO and CMO expenses, clinical study-related consulting and study site expenses, which include start-up costs as well as patient expenses. In 2014, Mast s most significant R&D expenses were external costs associated with the EPIC study, its Phase 2 study of vepoloxamer in ALI, and research-related manufacturing for vepoloxamer.

The following table summarizes Mast s consolidated R&D expenses by type for each of the periods listed and their respective percent of Mast s total R&D expenses for such periods (in thousands, except for percentages):

	Years Ended December 31,			
	2015	**%**	**2014**	**%**
External clinical study fees and expenses	$ 14,089	50%	$ 11,158	57%
External nonclinical study fees and expenses	9,519	34%	4,451	23%
Personnel costs	4,058	14%	3,401	18%
Share-based compensation expense	598	2%	425	2%
Total	$ 28,264	100%	$ 19,435	100%

R&D expenses increased by $8.8 million, or 45.4%, to $28.3 million for the year ended December 31, 2015, compared to $19.4 million for the year ended December 31, 2014. The increase in R&D expenses in 2015 compared to 2014 was due to a $5.1 million increase in external nonclinical study fees and expenses, a $2.9 million increase in external clinical study fees and expenses, a $0.7 million increase in personnel costs and a $0.2 million increase in share-based compensation expense.

The $5.1 million increase in external nonclinical study fees and expenses resulted primarily from increases of: 1) $2.9 million in research-related manufacturing costs for vepoloxamer, 2) $1.8 million primarily related to nonclinical toxicology studies of vepoloxamer to support Mast s NDA submission, and 3) $0.4 million in consulting expenses for NDA-readiness activities related to vepoloxamer. The $2.9 million increase in external clinical study fees and expenses was related primarily to increases of $3.3 million in EPIC study costs and $0.9 million in costs for Mast s

Phase 2 study of vepoloxamer in heart failure, offset by decreases of $0.8 million in costs for the discontinued Phase 2 study of vepoloxamer in ALI and $0.5 million in costs related to AIR001 clinical study expenses. The $0.7 million increase in personnel costs resulted primarily from additional regulatory, clinical operations, and research-related manufacturing staff hired in 2015.

Selling, General and Administrative Expenses. In 2015 and 2014, Mast s SG&A expenses primarily consisted of employee salaries and benefits, share-based compensation expense, facility lease and insurance costs, and professional and consulting fees for accounting, legal, investor relations, market strategy and research, human resources, facilities, internal systems support, and share-based compensation expense.

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SG&A expenses increased by $1.5 million, or 15.6%, to $11.0 million for the year ended December 31, 2015, compared to $9.5 million for the year ended December 31, 2014. This increase was due primarily to a $0.7 million increase in professional and consulting fees and a $0.5 million increase in personnel costs. Personnel costs for 2015 include $0.4 million of severance expense and $0.3 million of share-based compensation expense resulting from the termination of employment of Mast s former president and chief operating officer in February 2015 and the acceleration of stock option vesting pursuant to the terms of his option agreements.

Transaction-Related Expenses. There were no transaction-related expenses for the year ended December 31, 2015. Transaction-related expenses of $0.3 million for the year ended December 31, 2014 consisted primarily of legal fees associated with the acquisition of Aires.

Interest Income. Interest income for the year ended December 31, 2015 was $130,000 compared to $69,000 for the year ended December 31, 2014.

Interest Expense. Interest expense for the year ended December 31, 2015 was $603,000, $601,000 of which was related to the debt facility with Hercules. There was no interest expense in the year ended December 31, 2014.

Other Income, Net. Other income, net for the year ended December 31, 2015 was negligible. Other income, net for the year ended December 31, 2014 consisted primarily of a $0.5 million bargain purchase gain associated with the acquisition of Aires.

Net Loss. Net loss was $39.8 million, or $0.25 per share (basic and diluted), for the year ended December 31, 2015, compared to a net loss of $28.7 million, or $0.23 per share (basic and diluted), for the year ended December 31, 2014.

Liquidity and Capital Resources

Mast has a history of annual losses from operations and Mast anticipates that it will continue to incur losses for at least the next several years. For the nine months ended September 30, 2016, Mast incurred a loss from operations of $28.2 million. Mast s cash, cash equivalents and investment securities were $27.0 million and its working capital was $7.4 million as of September 30, 2016.

Mast historically has funded its operations principally through proceeds from sales of Mast s equity securities. In February 2016, Mast completed an underwritten public offering with gross proceeds of $8.0 million from the sale and issuance of 29,090,910 units, each consisting of one share of Mast s common stock and one warrant to purchase one share of its common stock. Net proceeds, after deducting underwriting discounts and commissions and other estimated offering expenses, were approximately $7.3 million. The warrants have an exercise price of $0.42 per share, are exercisable any time on or after August 17, 2016, subject to certain beneficial ownership limitations, and will expire on February 16, 2021.

As of September 30, 2016, Mast may receive up to $11.7 million, $18.3 million, $16.5 million and $11.9 million of additional net proceeds from the exercise of warrants issued in the underwritten public offerings it completed in November 2011, June 2013, November 2014 and February 2016. However, the timing of the exercise and extent to which any of these warrants are exercised before they expire are beyond Mast s control and depend on a number of factors, including certain beneficial ownership limitations and the market price of Mast s common stock. The exercise prices of these warrants are $1.10, $0.65, $0.75 and $0.42 per share, respectively. In comparison, the closing sale price of Mast s common stock on February 2, 2017 was $0.13 per share and Mast does not expect the holders of the warrants to exercise them unless and until Mast s common stock trades at or above the exercise price of their warrants. In addition, if at the time of exercise there is not an effective registration statement available for the issuance of the

shares subject to the warrants, the warrants may be exercised on a cashless net issuance basis, in which case Mast would not receive any proceeds from the exercise of these warrants.

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In February 2014, Mast entered into a sales agreement with Cowen and Company, LLC, or Cowen, to sell shares of Mast s common stock, with aggregate gross sales proceeds of up to $30.0 million, from time to time, through an at-the-market, or ATM, equity offering program, under which Cowen acts as sales agent. In August 2015, Mast terminated this agreement upon entry into a new sales agreement with Cowen to sell shares of its common stock, with aggregate gross sales proceeds of up to $30.0 million, from time to time, through an ATM program. As of September 30, 2016, Mast, through Cowen, had sold an aggregate of 51,148,582 shares at a weighted-average sales price of $0.54 per share under the ATM programs for aggregate gross proceeds of $27.4 million and $26.2 million in aggregate net proceeds, after deducting sales agent commission and discounts and Mast s other offering costs.

In 2015, Mast borrowed $15.0 million under a debt facility whereby Mast received proceeds of approximately $14.8 million, net of fees. The debt facility is governed by a loan and security agreement, as amended, among Mast, Hercules Technology III, L.P., and Hercules Capital, Inc. (formerly known as Hercules Technology Growth Capital, Inc.), together referred to as Hercules. During the three months ended September 30, 2016, the top-line results of the Phase 3 clinical study of vepoloxamer triggered a prepayment provision under the loan and security agreement requiring Mast to prepay to Hercules $10.0 million of the principal balance of the loan and any accrued but unpaid fees and expenses (referred to as the Second Advance Prepayment). Mast made the Second Advance Prepayment on October 3, 2016. Mast is required to repay the remaining principal balance in equal monthly installments of principal and interest payments on the first business day of each month through the scheduled maturity date of January 1, 2019. The principal balance as of February 2, 2017 was $3.1 million.

Under the loan and security agreement with Hercules, the merger would result in a change in control of Mast, triggering immediate repayment of the outstanding amount of all principal, accrued interest, accrued, unpaid fees and expenses, together with a prepayment charge of 2% of the principal balance and an end of term charge of $712,500 (referred to as the Change in Control Prepayment Provisions). Subject to completion of Hercules due diligence, internal approvals, and agreement to the terms and conditions in definitive legal documents, Mast expects to enter into an amendment to its agreement with Hercules, to become effective contingent upon consummation of the merger, whereby the merger would not trigger the Change in Control Repayment Provisions and the loan would remain in place upon its existing terms, including the January 1, 2019 scheduled maturity date. However, Mast and Hercules contemplate that the amendment will require the combined company to maintain (a) at least $4 million of cash unless and until Mast, Savara or the combined company raised $6 million in net cash proceeds from equity and/or subordinated debt financings on or before April 30, 2017 and (b) at least $2 million of cash unless and until Mast, Savara or the combined company raised $20 million in net cash proceeds from equity and/or subordinated debt financings and/or certain research grant awards on or before August 31, 2017. In consideration for this amendment and the consents and waivers to be provided by Hercules, Mast expects to pay a service fee of $50,000 to Hercules and amend its warrant agreement with Hercules such that the current warrant exercise price of $0.275 per share would be reduced to the lesser of (a) $0.10 per share and (b) if the closing market price of Mast scommon stock is lower than $0.10 per share for three consecutive days before consummation of the merger with Savara, the lowest three-day volume-weighted average price of Mast s common stock during that period. The service fee payment would be made upon execution of the amendment, but the change to the warrant exercise price would be contingent upon the amendment becoming effective.

See Note 9, Debt Facility, of the Notes to the Mast Condensed Consolidated Financial Statements in this proxy statement/prospectus/information statement for additional information regarding Mast s debt facility with Hercules. Mast s obligations under Mast s agreement with Hercules are secured by substantially all of Mast s assets other than its intellectual property, but including proceeds from the sale, licensing or other disposition of its intellectual property. Mast s intellectual property is subject to negative covenants, which, among other things, prohibit Mast from selling, transferring, assigning, mortgaging, pledging, leasing, granting a security interest in or otherwise encumbering Mast s intellectual property, subject to limited exceptions. The agreement includes a number of other restrictive covenants

that may limit Mast s ability to raise capital through other debt or equity financing. The debt facility also includes events of default, the occurrence and continuation of which would

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provide Hercules with the right to exercise remedies against Mast and the collateral securing its indebtedness, which include declaring payment of all or any part of the debt, together with an end of term charge of $712,500 and a prepayment charge of 1% or 2% of the then outstanding principal balance, immediately due and payable. These events of default include, among other things, its failure to pay any amount due on the due date, Mast s breach or default in the performance of any covenant under the debt facility, Mast s insolvency, the attachment, seizure, or filing of a levy against Mast s assets or a judgment entered against it in an amount greater than $250,000, the occurrence of any default under certain other indebtedness, and, subject to limited exceptions, the occurrence of an event or circumstance that would reasonably be expected to have a material adverse effect on the business, operations, assets or financial condition of Mast, its ability to repay its indebtedness in accordance with the terms of the debt facility, or on the collateral securing Mast s indebtedness.

Operating activities. Net cash used in operating activities was $29.9 million for the nine months ended September 30, 2016, reflecting primarily a net loss of $30.1 million and a decrease in accounts payable and accrued liabilities of $2.9 million, adjusted for share-based compensation expenses of $2.0 million and amortization of debt issuance costs and debt discount of $0.9 million. Net cash used in operating activities was $24.1 million for the nine months ended September 30, 2015, reflecting primarily a net loss of $29.7 million, adjusted for share-based compensation expenses of $2.1 million and an increase in accounts payable and accrued liabilities of $3.5 million, offset by $0.3 million an increase in prepaid expenses and other assets.

Net cash used in operating activities was $32.9 million for the year ended December 31, 2015 and consisted primarily of a net loss of $39.8 million adjusted for non-cash items, including share-based compensation expense of $2.7 million, a net increase of $3.9 million due to changes in assets and liabilities, and $0.2 million of amortization of debt issuance costs and debt discount. Net cash used in operating activities was $24.6 million for the year ended December 31, 2014 and consisted primarily of a net loss of $28.7 million adjusted for non-cash items, including share-based compensation expense of $2.0 million, a net increase of $2.4 million due to changes in assets and liabilities, offset by a gain on bargain purchase for the Aires acquisition of $0.5 million.

Investing activities. Net cash provided by investing activities was $11.5 million for the nine months ended September 30, 2016 compared to $3.7 million for the same period in 2015. Net cash provided by investing activities for the nine months ended September 30, 2016 was primarily due to $11.5 million in proceeds from the maturity of certificates of deposit. Net cash provided by investing activities for the nine months ended September 30, 2015 was primarily due to $12.0 million in proceeds from the maturity of certificates of deposit, offset by $8.2 million used to purchase certificates of deposit.

Net cash provided by investing activities was $3.4 million for the year ended December 31, 2015, compared to $0.5 million in 2014. The difference was due primarily to a decrease of $5.7 million in purchases of certificates of deposit, an increase of $0.4 million in proceeds from maturities of certificates of deposit, offset by $3.5 million in cash obtained in Mast s acquisition of Aires for the year ended December 31, 2014.

Financing activities. Net cash provided by financing activities was $15.9 million for the nine months ended September 30, 2016 compared to $16.8 million for the same period in 2015. Cash provided by financing activities for the nine months ended September 30, 2016 was primarily a result of net proceeds of $9.6 million from the sale of common stock under its ATM equity offering program, net proceeds of $7.3 million from the sale of units consisting of shares of Mast s common stock and warrants to purchase Mast s common stock in February 2016, and proceeds of $0.4 million from the exercise of warrants. Net cash provided by sales of Mast s equity securities were offset by $1.4 million in payments made on and costs related to Mast s debt facility in the nine months ended September 30, 2016. Net cash provided by financing activities for the nine months ended September 30, 2015 was primarily a result of net proceeds of $14.8 million under its debt facility and net proceeds of $2.0 million from the sale of common stock

under Mast s ATM equity offering program.

Net cash provided by financing activities was $16.8 million for the year ended December 31, 2015, compared to $34.3 million for the year ended December 31, 2014. The cash provided by financing activities in

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2015 consisted of net proceeds of $14.8 million under Mast s debt facility with Hercules and $2.0 million from sales of its shares of common stock through Mast s ATM program. Net cash provided by financing activities in 2014 consisted of net proceeds of $19.7 million from the underwritten public offering of Mast s equity securities completed in November 2014 and net proceeds of $14.6 million from sales of Mast s common stock under the ATM program.

Management Outlook

Based on its projected capital needs, Mast s current cash, cash equivalents and investment securities and working capital will not be sufficient to fund its operations for the next 12 months. Mast expects that its cash, cash equivalents and investment securities as of September 30, 2016 will be sufficient to fund its operations into the second quarter of 2017. Subject to restrictions in the Merger Agreement, Mast intends to raise additional capital through its ATM program, other equity or debt financings, and/or through collaborations, including licensing arrangements, to pursue its current business strategy and planned operations. However, these efforts may not be successful and adequate additional capital may not be available to Mast on acceptable terms, on a timely basis, or at all. These uncertainties raise substantial doubt about its ability to continue as a going concern.

Estimates of the period of time through which its current financial resources will be adequate to support its operations are forward-looking statements based on significant assumptions. Mast could utilize its financial resources sooner than it currently expects. Forward-looking statements involve a number of risks and uncertainties and actual results could differ materially if the assumptions on which Mast has based its forward-looking statements prove to be wrong. Factors that will affect Mast s operating expenses and future capital requirements include, but are not limited to:

- the extent of expenses incurred in connection with seeking stockholder approval of the merger and completing the transaction contemplated by the Merger Agreement;
- Mast s ability to manage its operating costs;
- the scope and nature of activities Mast pursues to advance development of its product candidates, including clinical and nonclinical studies and research-related manufacturing activities;
- delays in commencement and completion of clinical and nonclinical studies of Mast s product candidates and the extent to which results are negative or inconclusive;
- resources allocated to pursue strategic opportunities for Mast s vepoloxamer-related assets or, if Mast and Savara do not consummate the merger, to pursue potential financing transactions or strategic opportunities for all of its assets, and the nature of any such transaction, if executed; and
- Mast s ability to avoid an event of default under its loan agreement with Hercules that would accelerate repayment of all or part of its obligations under the agreement.

Mast may utilize its current financial resources sooner than it currently expects if it is not successful in managing its operating costs, including costs related to consummating the merger, or if Mast incurs unanticipated expenses, or if

other assumptions on which Mast has based its plans and forecasts prove to be wrong. If Mast is unable to raise sufficient additional capital as needed, Mast may further reduce its operations and may also be compelled to repay all of its outstanding debt to Hercules and/or sell certain assets, including intellectual property assets, for less than what Mast believes their value may be under other circumstances, any of which would have a material and adverse effect on Mast s financial condition and ability to pursue its business strategy.

Recent Accounting Pronouncements

See Note 3, Summary of Significant Accounting Policies, of the Notes to the Mast Condensed Consolidated Financial Statements (Unaudited) in this proxy statement/prospectus/information statement for a discussion of recent accounting pronouncements and their effect, if any, on Mast.

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QUANTITATIVE AND QUALITATIVE DISCLOSURES

ABOUT MAST MARKET RISK

Mast has market risk exposure related to its cash, cash equivalents and investment securities. Mast invests its excess cash in FDIC-insured certificates of deposit. Changes in interest rates affect the interest income Mast earns on its investments and therefore impacts its cash flows and results of operations.

Mast does not believe that its cash, cash equivalents and investment securities have significant risk of default or illi