Jaguar Animal Health, Inc.
Form S-4/A
July 03, 2017

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As filed with the Securities and Exchange Commission on June 30, 2017

Registration No. 333-217364

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Amendment No. 5
to

FORM S-4

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

JAGUAR ANIMAL HEALTH, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**2834**	**46-2956775**
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

201 Mission Street, Suite 2375
San Francisco, California 94105
(415) 371-8300
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Lisa A. Conte
Chief Executive Officer and President
Jaguar Animal Health, Inc.
201 Mission Street, Suite 2375
San Francisco, California 94105
(415) 371-8300
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies of all correspondence to:

Donald C. Reinke, Esq.
David T. Mittelman, Esq.
Reed Smith LLP
1510 Page Mill Road, Suite 110
Palo Alto, California 94304
(650) 352-0500

Approximate date of commencement of proposed sale of the securities to the public:
As soon as practicable after the effectiveness 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. o

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. o

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. o

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

Large accelerated filer o	Accelerated filer o	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company ý
			Emerging growth company ý

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ý

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

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

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

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 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 joint proxy statement/prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This joint proxy statement/prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer, solicitation or sale is not permitted.

Subject to completion, dated June 30, 2017

[•], 2017

Dear Stockholders of Jaguar Animal Health, Inc. and Napo Pharmaceuticals, Inc.,

We are pleased to enclose the joint proxy statement/prospectus relating to the acquisition of Napo Pharmaceuticals, Inc. (sometimes referred to as Napo) by Jaguar Animal Health, Inc. (sometimes referred to as Jaguar) through a merger. We believe that this merger will enable both companies, through a joint management team, to enhance potential value for stockholders, and that both Jaguar and Napo will benefit from the synergies and economies of scale that a merger should create in manufacturing and commercialization of crofelemer for various human and animal indications.

At the effective time of the merger, (i) each issued and outstanding share of Napo common stock (other than dissenting shares and shares held by Jaguar or Napo) will be converted into a contingent right to receive (x) up to a whole number of shares of Jaguar common stock comprising in the aggregate up to approximately 20.2% of the fully diluted shares of Jaguar common stock immediately following the consummation of the merger, which contingent right will vest only if the resale of certain shares of Jaguar common stock (sometimes referred to herein as the Tranche A Shares) issued by Jaguar to Nantucket Investments Limited (sometimes referred to herein as Nantucket) pursuant to the Napo debt settlement provides Nantucket with specified cash returns over a specified period of time (sometimes referred to herein as the Hurdle Amounts), and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A Shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units, (ii) existing creditors of Napo (inclusive of Nantucket) will be issued in the aggregate approximately 42,957,072 shares of Jaguar non-voting common stock and 2,282,445 shares of Jaguar voting common stock in full satisfaction of all existing indebtedness then owed by Napo to such creditors, and (iii) an existing Napo stockholder (sometimes referred to herein as Invesco) will be issued an aggregate of approximately 3,243,243 shares of Jaguar common stock in return for $3 million of new funds invested into Jaguar by such investor, which will be immediately loaned to Napo to partially facilitate the extinguishment of the debt that Napo owes to Nantucket. The minimum Hurdle Amount needed for the vesting of the contingent rights will vary depending on a number of factors (including, among other things, the time period over which Nantucket receives specified cash returns in connection with the resale of the Tranche A Shares), and Napo stockholders may not receive any shares of Jaguar common stock in certain circumstances (including if the minimum Hurdle Amount is not satisfied). At the closing sales price of Jaguar common stock on the last trading day before the date of this joint proxy statement/prospectus, the resale of the Tranche A Shares to third parties would not provide Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount. Although the contingent rights will vest upon the satisfaction of the applicable Hurdle Amount, Jaguar may defer making the final determination of the shares issuable to the contingent right holders until the later of (i) the date when any and all indemnification claims timely made under the merger agreement are satisfied and (ii) April 1, 2020. For a discussion of the minimum Hurdle Amount and the calculation of the number of Merger Shares issuable to the holders of contingent rights, see "The Merger Agreement and Related Agreements Merger Consideration Calculation of Shares of Jaguar Common Stock Issuable to Holders of Contingent Rights" and *Annex E* to this joint proxy statement/prospectus.

Shares of Jaguar non-voting common stock have the same rights to dividends and other distributions and are convertible into shares of common stock on a one-for-one basis (x) upon transfers to non-affiliates of Nantucket, (y) upon the release from escrow of certain non-voting shares held by Nantucket to the legacy stockholders of Napo under specified conditions and (z) at any time on or after April 1, 2018 at the option of the respective holders thereof.

Jaguar will also assume (i) each outstanding and unexercised option to purchase Napo common stock, which will be converted into options to purchase Jaguar common stock, (ii) each outstanding warrant to purchase Napo common stock, which will be converted into warrants to purchase Jaguar common stock, and (iii) each outstanding restricted stock unit to acquire Napo common stock, which will be converted into restricted stock units to acquire Jaguar common stock.

The stockholders of Jaguar will continue to own their existing shares and the rights and privileges of their existing shares will not be affected by the merger. However, because Jaguar will be issuing new shares of Jaguar common stock and non-voting common stock to Napo creditors, and options, warrants and restricted stock units exercisable for Jaguar common stock to holders of Napo options, warrants and restricted stock units in the merger, the stockholders of Jaguar will experience dilution as a result of the issuance of shares in the merger and each outstanding share of Jaguar common stock immediately prior to the merger will represent a smaller percentage of the total number of shares of Jaguar common stock and non-voting common stock issued and outstanding after the merger. It is expected that Jaguar stockholders before the merger will hold approximately 25% of the total Jaguar common stock and non-voting common stock issued and outstanding on a fully diluted basis immediately following completion of the merger. Thus, Jaguar stockholders before the merger will experience dilution in the

amount of approximately 75% as a result of the merger.

We estimate that Jaguar may issue up to an aggregate of approximately 69,299,346 shares of its common stock and non-voting common stock to Napo creditors, noteholders, holders of Napo warrants, options or restricted stock units, and Invesco (sometimes referred to herein collectively as the Napo Stakeholders) as contemplated by the merger agreement. Immediately following completion of the merger, Jaguar stockholders immediately prior to the merger will own approximately 25% of Jaguar's outstanding common stock and non-voting common stock and the Napo Stakeholders will own approximately 75% of Jaguar's outstanding common stock and non-voting common stock, in each case calculated based on a fully diluted basis of Jaguar as of March 31, 2017, assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more. Jaguar's common stock will continue to be listed on The NASDAQ Capital Market under the symbol "JAGX", subject to NASDAQ's determination on delisting. See "Risk Factors Risks Related to Ownership of Jaguar's Common Stock Jaguar's failure to meet the continued listing requirements of The NASDAQ Capital Market could result in a delisting of its common stock." Jaguar's non-voting common stock will not be listed on any stock exchange.

Jaguar stockholders are cordially invited to attend Jaguar's special meeting of stockholders to be held at 201 Mission Street, Suite 2375, San Francisco, CA 94105 on July 27, 2017 at 2:30 p.m., local time, at which time the holders of Jaguar common stock will be asked to consider and vote upon proposals related to the merger including (i) a proposal to approve the issuance of Jaguar common stock and non-voting common stock to certain of Napo's existing creditors in connection with the proposed merger, (ii) a proposal to approve the issuance of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, issued or issuable by Napo to certain investors in the original principal amount of up to $12,500,000, as amended on March 31, 2017, (iii) a proposal to approve the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to Invesco Asset Management Limited, or Invesco, pursuant to the Commitment Letter, dated February 21, 2017, between Jaguar and Invesco (sometimes referred to herein as the Invesco Commitment Letter), (iv) a proposal to approve the issuance of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, issued by Jaguar to an institutional investor in the original principal amount of $2,155,000, (v) a proposal to amend the Jaguar 2014 Stock Incentive Plan (sometimes referred to herein as the 2014 Plan) to increase the number of shares of Jaguar common stock authorized for issuance under the 2014 Plan by 6,500,188 shares, (vi) a proposal to adopt Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc.", (vii) a proposal to adopt Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock, (viii) a proposal to adopt Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock, and (ix) a proposal to adjourn Jaguar's special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to approve the above matters.

Napo stockholders are cordially invited to attend a special meeting of the stockholders to be held at 201 Mission Street, Suite 2375, San Francisco, CA 94105 on July 27, 2017 at 9:00 a.m., local time, at which time the stockholders of Napo will be asked to consider and vote upon (i) a proposal to adopt the merger agreement and approve the merger and (ii) a proposal to adjourn Napo's special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to adopt the merger agreement and approve the merger.

We urge you to read the enclosed joint proxy statement/prospectus, which includes important information about the merger, Jaguar's special meeting and Napo's special meeting. **In particular, see "Risk Factors" beginning on page 32 of the joint proxy statement/prospectus for a description of the risks that you should consider in evaluating the merger.**

Jaguar's board of directors (sometimes referred to as the Jaguar Board) unanimously recommends that Jaguar stockholders vote "FOR" the issuance of the shares of common stock and non-voting common stock, "FOR" the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, "FOR" the proposal respecting the issuance of shares of Jaguar common stock to Invesco pursuant to the Invesco Commitment Letter, "FOR" the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, "FOR" the amendment of the 2014 Plan, "FOR" the increase in the number of authorized shares of common stock from 50 million shares to 300 million shares and change in the Jaguar corporate name to "Jaguar Health, Inc.", "FOR" the authorization of a class of non-voting common stock, "FOR" the requirement to obtain Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock, and "FOR" the other matters to be considered at the Jaguar special meeting.

Napo's board of directors (sometimes referred to as the Napo Board) unanimously recommends that Napo stockholders vote "FOR" the adoption of the merger agreement and "FOR" the other matters to be considered at the Napo special meeting. It should be noted that in connection with the merger, the Napo Board will receive indemnification for acts or omissions occurring prior to the effective time of the merger.

Your vote is very important. Whether or not you plan to attend your respective company's meeting of stockholders, please submit your proxy as soon as possible to make sure that your shares are represented at that meeting. Information about these meetings, the merger and the other business to be considered by stockholders is contained in this joint proxy statement/prospectus. We urge you to read this joint proxy statement/prospectus carefully.

Sincerely,

/s/ LISA A. CONTE

Lisa A. Conte
Chief Executive Officer and President
Jaguar Animal Health, Inc.
Interim Chief Executive Officer
Napo Pharmaceuticals, Inc.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities to be issued in connection with the merger or determined if this joint proxy statement/prospectus is accurate or complete. Any representation to the contrary is a criminal offense.

The enclosed joint proxy statement/prospectus is dated [•], 2017, and is first being mailed or otherwise delivered to stockholders of Jaguar and Napo on or about [•], 2017.

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JAGUAR ANIMAL HEALTH, INC.

201 Mission Street
Suite 2375
San Francisco, CA 94105
NOTICE OF 2017 SPECIAL MEETING OF STOCKHOLDERS
TO BE HELD JULY 27, 2017

To the Stockholders of Jaguar Animal Health, Inc.:

Jaguar Animal Health, Inc.'s special meeting of all stockholders will be held at 201 Mission Street, Suite 2375, San Francisco, CA 94105 on July 27, 2017 at 2:30 p.m., local time, for the following purposes:

1. To approve the issuance of shares of Jaguar common stock and non-voting common stock in connection with the transactions contemplated by the Agreement and Plan of Merger, dated as of March 31, 2017, by and among Jaguar Animal Health, Inc., Napo Acquisition Corporation, Napo Pharmaceuticals, Inc. and a representative of Napo Pharmaceuticals, Inc. (sometimes referred to as the merger agreement). A copy of the merger agreement has been included as *Annex A* to this joint proxy statement/prospectus.

2. To approve the issuance of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, issued or issuable by Napo to certain investors in the original principal amount of up to $12,500,000, as amended on March 31, 2017.

3. To approve the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to Invesco Asset Management Limited, or Invesco, pursuant to the Commitment Letter, dated February 21, 2017, between Jaguar and Invesco (sometimes referred to herein as the Invesco Commitment Letter).

4. To approve the issuance of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, issued by Jaguar to an institutional investor in the original principal amount of $2,155,000.

5. To approve the amendment of the Jaguar 2014 Stock Incentive Plan (sometimes referred to herein as the 2014 Plan) to increase the number of shares of Jaguar common stock authorized for issuance under the 2014 Plan by 6,500,188 shares.

6. To approve Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc." A copy of Jaguar's Third Amended and Restated Certificate of Incorporation has been included as *Annex B* to this joint proxy statement/prospectus.

7. To approve Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock.

8. To approve Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock.

9. To adjourn the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to approve (i) the issuance of shares of Jaguar common stock described in Proposals 1-4, (ii) the amendment of the 2014 Plan described in Proposal 5, (iii) the increase in the number of authorized shares of common stock described in Proposal 6, (iv) the authorization of a class of non-voting common stock described in Proposal 7, and/or (v) the requirement to obtain Nantucket's prior written consent before the issuance of dividends to holders

of Jaguar common stock and/or non-voting common stock described in Proposal 8.

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

If you held shares of Jaguar common stock at the close of business on June 30, 2017, you are entitled to notice of and to vote at the special meeting and any adjournments or postponements thereof. If a new record date is set, you will be entitled to vote at the special meeting if you held shares in Jaguar as of such record date.

The Jaguar Board unanimously recommends that you vote "FOR" all of these proposals, which are described in detail in the accompanying joint proxy statement/prospectus. Your attention is directed to the accompanying joint proxy statement/prospectus for a discussion of the merger and the merger agreement, as well as the other matters that will be considered at the meeting.

Your vote is very important. Approval of each of the proposals by the Jaguar stockholders is integral to the completion of the merger. If you do not submit your proxy by telephone, the Internet, or return your signed proxy card(s) by mail or vote in person at the special meeting, it will be more difficult for Jaguar to obtain the necessary quorum to hold its special meeting.

Whether or not you plan to attend the special meeting in person, please complete, sign, date and return the enclosed proxy in the accompanying self-addressed postage pre-paid envelope or complete your proxy by following the instructions supplied on the proxy card for voting by telephone or via the Internet (or, if your shares are held in "street name" by a broker, nominee, fiduciary or other custodian, follow the directions given by the broker, nominee, fiduciary or other custodian regarding how to instruct it to vote your shares) as soon as possible. If you attend the special meeting, you may withdraw your proxy and vote in person.

IMPORTANT NOTICE REGARDING THE INTERNET AVAILABILITY OF PROXY MATERIALS FOR THE JAGUAR 2017 SPECIAL MEETING OF STOCKHOLDERS TO BE HELD JULY 27, 2017

This Joint Proxy Statement/Prospectus and Jaguar's Annual Report on Form 10-K for the year ended December 31, 2016 are available at the following website address: www.jaguaranimalhealth.com. You are encouraged to access and review all of the important information contained in the proxy materials before voting. The Jaguar Annual Report is not to be regarded as proxy soliciting material or as a communication through which any solicitation of proxies is made.

By Order of the Board of Directors,

/s/ JAMES J. BOCHNOWSKI

James J. Bochnowski
Chairman of the Board

San Francisco, CA
[•], 2017

PLEASE VOTE YOUR SHARES PROMPTLY. YOU CAN FIND INSTRUCTIONS FOR VOTING ON THE ENCLOSED PROXY CARD. IF YOU HAVE QUESTIONS ABOUT THE PROPOSALS OR ABOUT VOTING YOUR SHARES, PLEASE CALL JAGUAR'S TRANSFER AGENT, COMPUTERSHARE TRUST COMPANY N.A., AT (800) 962-4284.

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Napo Pharmaceuticals, Inc.

201 Mission Street
Suite 2375
San Francisco, CA 94105

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS
TO BE HELD ON JULY 27, 2017

To the Stockholders of Napo Pharmaceuticals, Inc.:

A special meeting of stockholders of Napo Pharmaceuticals, Inc. will be held at 201 Mission Street, Suite 2375, San Francisco, CA 94105, on July 27, 2017 at 9:00 a.m., local time, for the following purposes:

1. To adopt the Agreement and Plan of Merger, dated as of March 31, 2017, by and among Jaguar Animal Health, Inc., Napo Acquisition Corporation, Napo Pharmaceuticals, Inc. and a representative of Napo Pharmaceuticals, Inc., (sometimes referred to as the merger agreement) and thereby approve the merger. A copy of the merger agreement has been included as *Annex A* to this joint proxy statement/prospectus.

2. To adjourn the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to adopt the merger agreement and approve the merger.

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

If you held shares of Napo common stock at the close of business on June 30, 2017, you are entitled to notice of and to vote at the special meeting and any adjournments or postponements thereof. If a new record date is set, you will be entitled to vote at the special meeting if you held shares in Napo as of such record date.

The Napo Board has unanimously approved the merger agreement, has determined that the merger agreement and the transactions contemplated thereby, including the merger, are advisable and in the best interests of Napo and its stockholders, and unanimously recommends that Napo stockholders vote "FOR" the Napo merger proposal and "FOR" the Napo adjournment proposal.

Your vote is very important. The conditions to the merger include that the Napo stockholders approve the adoption of the merger agreement. If you do not return your signed proxy card(s) by mail or vote in person at your special meeting, it will be more difficult for Napo to obtain the necessary quorum to hold its special meeting.

Whether or not you plan to attend the special meeting in person, please complete, sign, date and return the enclosed proxy in the accompanying self-addressed postage pre-paid envelope (or, if your shares are held in "street name" by a broker, nominee, fiduciary or other custodian, follow the directions given by the broker, nominee, fiduciary or other custodian regarding how to instruct it to vote your shares) as soon as possible. If you attend the special meeting, you may withdraw your proxy and vote in person.

By Order of the Board of Directors,

/s/ LISA A. CONTE

Lisa A. Conte
Interim Chief Executive Officer

San Francisco, CA
[•], 2017

PLEASE VOTE YOUR SHARES PROMPTLY. YOU CAN FIND INSTRUCTIONS FOR VOTING ON THE ENCLOSED PROXY CARD. IF YOU HAVE QUESTIONS ABOUT THE PROPOSALS OR ABOUT VOTING YOUR SHARES, PLEASE CALL COMPUTERSHARE INVESTOR SERVICES (JERSEY) AT +44 370-7074040 OR VIA EMAIL AT #UKCSBRS.EXTERNALPROXYQUERIES@COMPUTERSHARE.CO.UK.

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ADDITIONAL INFORMATION

Jaguar files annual, quarterly and current reports with the SEC that include important business and financial information about Jaguar. This information is available for you to review at the public reference room of the Securities and Exchange Commission, or SEC, located at 100 F Street, N.E., Washington, D.C. 20549, and through the SEC's website at www.sec.gov. You can also obtain these documents or copies of this joint proxy statement/prospectus free of charge on the investor relations page of Jaguar's website at www.jaguaranimalhealth.com or by requesting it in writing or by telephone from Jaguar at the following address or telephone number:

201 Mission Street, Suite 2375
San Francisco, CA 94105
(415) 371-8300
Attn.: Investor Relations
Website: www.jaguaranimalhealth.com

To obtain timely delivery, you must request the information no later than five business days before July 27, 2017. If you would like to request any documents, please do so by July 20, 2017 in order to receive them before Jaguar's special meeting. See "Where You Can Find More Information."

You should rely only on the information contained in this document. No one has been authorized to provide you with information that is different from that contained in this document. This document is dated [•], 2017, and you should assume that the information in this document is accurate only as of such date. Neither the mailing of this document to Napo stockholders nor the issuance by Jaguar of shares of Jaguar common stock and/or non-voting common stock in connection with the merger will create any implication to the contrary.

IMPORTANT NOTICE REGARDING THE INTERNET AVAILABILITY OF PROXY MATERIALS FOR THE JAGUAR 2017 SPECIAL MEETING OF STOCKHOLDERS TO BE HELD JULY 27, 2017

This Joint Proxy Statement/Prospectus and Jaguar's Annual Report on Form 10-K for the year ended December 31, 2016 are available at the following website address: www.jaguaranimalhealth.com. You are encouraged to access and review all of the important information contained in the proxy materials before voting. The Jaguar Annual Report is not to be regarded as proxy soliciting material or as a communication through which any solicitation of proxies is made.

This document does not constitute an offer to sell, or a solicitation of an offer to buy, any securities, or the solicitation of a proxy, in any jurisdiction to or from any person to whom it is unlawful to make any such offer or solicitation in such jurisdiction. Except where the context otherwise indicates, information contained in this document regarding Napo has been provided by Napo and information contained in this document regarding Jaguar has been provided by Jaguar.

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QUESTIONS AND ANSWERS ABOUT THIS JOINT PROXY STATEMENT/PROSPECTUS

The following are some questions that you, as a stockholder of Jaguar and/or Napo, may have regarding this joint proxy statement/prospectus, the Jaguar special meeting of stockholders and the Napo special meeting of stockholders, together with brief answers to those questions. Jaguar and Napo urge you carefully read this joint proxy statement/prospectus in its entirety, including the annexes and other documents attached and/or referred to in this joint proxy statement/prospectus, because the information in this section does not provide all of the information that will be important to you with respect to the Jaguar special meeting of stockholders and/or the Napo special meeting of stockholders.

Q: **Why am I receiving this document?**

A: You are receiving this document because you have been identified as a stockholder of Jaguar Animal Health, Inc. (sometimes referred to as Jaguar) or Napo Pharmaceuticals, Inc. (sometimes referred to as Napo) as of the applicable record date, and you are entitled, as applicable, to vote at Jaguar's special meeting of stockholders or Napo's special meeting of stockholders to approve the matters set forth below.

In connection with the proposed acquisition of Napo by Jaguar through a merger, holders of Jaguar common stock are being asked to approve at the special meeting: (i) the issuance of shares of Jaguar common stock and non-voting common stock in connection with the transactions contemplated by the Agreement and Plan of Merger, dated as of March 31, 2017 (sometimes referred to as the merger agreement), by and among Jaguar, Napo Acquisition Corporation (sometimes referred to as Merger Sub), Napo, and a Napo representative, (ii) the issuance of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, issued or issuable by Napo to certain investors in the original principal amount of up to $12,500,000, as amended on March 31, 2017, (iii) the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to Invesco Asset Management Limited, or Invesco, pursuant to the Commitment Letter, dated February 21, 2017, between Jaguar and Invesco (sometimes referred to herein as the Invesco Commitment Letter), (iv) the issuance of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, issued by Jaguar to an institutional investor in the original principal amount of $2,155,000, (v) the amendment of the Jaguar 2014 Stock Incentive Plan (sometimes referred to herein as the 2014 Plan) to increase the number of shares of Jaguar common stock authorized for issuance under the 2014 Plan by 6,500,188 shares, (vi) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc.", (vii) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock, (viii) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock, and (ix) a proposal to adjourn Jaguar's special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to approve the above matters.

Napo stockholders are being asked to adopt at a special meeting (i) the merger agreement, and thereby approve the merger, and (ii) a proposal to adjourn the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to adopt the merger agreement and approve the merger.

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This document is serving as both a joint proxy statement of Jaguar and Napo and a prospectus of Jaguar. It is a joint proxy statement because it is being used by each of the Jaguar Board and Napo Board to solicit proxies from their respective stockholders with respect to the meetings. It is a prospectus because Jaguar is offering contingent rights to receive shares of its common stock in exchange for shares of Napo common stock if the merger is completed and such contingent rights may entitle the holders thereof to receive shares of Jaguar common stock if certain conditions are satisfied. A copy of the merger agreement is attached as *Annex A* to this joint proxy statement/prospectus.

Q:

Who is entitled to vote at Jaguar's special meeting?

A:

All holders of Jaguar common stock, who held shares at the record date for the Jaguar special meeting (the close of business on June 30, 2017) are entitled to receive notice of, and to vote at, the Jaguar special meeting provided that those shares remain outstanding on the date of the Jaguar special meeting. As of the close of business on June 30, 2017, there were [•] shares of Jaguar common stock issued and outstanding. Each holder of Jaguar outstanding common stock is entitled to one vote for each share of Jaguar common stock owned at the record date.

Q:

Who is entitled to vote at the Napo special meeting?

A:

All holders of Napo common stock who held shares at the record date for the Napo special meeting (the close of business on June 30, 2017) are entitled to receive notice of, and to vote at, the Napo special meeting provided that those shares remain outstanding on the date of the Napo special meeting. As of the close of business on June 30, 2017, there were [•] shares of Napo common stock issued and outstanding. Each holder of Napo common stock is entitled to one vote for each share of Napo common stock owned at the record date.

Q:

What constitutes a quorum for the Jaguar special meeting?

A:

A quorum is the number of shares that must be represented at a meeting to lawfully conduct business. The presence at the special meeting, in person, or by remote communication, if applicable, or by proxy, of the holders of a majority of the shares of Jaguar common stock issued and outstanding and entitled to vote at the special meeting constitutes a quorum for the transaction of business. Abstentions and broker non-votes, if any, will be included in the calculation of the number of shares considered to be present at the Jaguar special meeting for purposes of determining a quorum.

Q:

What constitutes a quorum for the Napo special meeting?

A:

A quorum is the number of shares that must be represented at a meeting to lawfully conduct business. The presence at the special meeting, in person or by proxy, of the holders of a majority of the shares of Napo common stock issued and outstanding and entitled to vote at the special meeting constitutes a quorum for the transaction of business. Abstentions and broker non-votes, if any, will be included in the calculation of the number of shares considered to be present at the meeting for quorum purposes.

Q:

How will my proxy be voted?

A:

If you are a Jaguar stockholder and you submit your proxy by telephone, by the Internet or by completing, signing, dating and returning your signed proxy card(s), your proxy will be voted in accordance with your instructions. If you are a Napo stockholder and you complete, sign, date and return your signed proxy card(s), your proxy will be voted in accordance with your instructions. If other matters are properly brought before the stockholders meetings, or any adjournments of the

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meetings, your proxy includes discretionary authority on the part of the individuals appointed to vote your shares to act on those matters according to their best judgment.

Q: **May I vote in person?**

A: Yes. If you hold shares directly in your name as a stockholder of record of Jaguar stock as of the close of business on June 30, 2017, or of Napo common stock as of the close of business on June 30, 2017, you may attend your annual or special meeting, as applicable, and vote your shares in person, instead of submitting your proxy by telephone, by the Internet or returning your signed proxy card(s) by mail, as applicable. If you hold shares of Jaguar common stock or Napo common stock in "street name," meaning through a broker, nominee, fiduciary or other custodian, you must obtain a legal proxy from that institution and present it to the inspector of election with your ballot to be able to vote in person at the Jaguar special meeting or Napo special meeting, as applicable. To request a legal proxy, please contact your broker, nominee, fiduciary or other custodian. Jaguar and Napo highly recommend that you vote in advance by submitting your proxy by telephone, by the Internet or by mail, as applicable, even if you plan to attend the stockholders meeting of your company.

Q: **What are the voting requirements to approve each of the proposals that will be voted on at the Jaguar special meeting?**

A:

	Proposal	Vote Required
1.	Approval of the issuance of shares of Jaguar common stock and non-voting common stock in connection with the transactions contemplated by the merger agreement	If a quorum is present, a majority of the shares of Jaguar common stock represented at the special meeting, voting together as a single class, and entitled to vote.
2.	Approval of the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, issued or issuable by Napo to certain investors in the original principal amount of up to $12,500,000, as amended on March 31, 2017	If a quorum is present, a majority of the shares of Jaguar common stock represented at the special meeting, voting together as a single class, and entitled to vote.
3.	Approval of the issuance of $3,000,000 in shares of Jaguar common stock at a price equal to $0.925 per share to Invesco Asset Management Limited pursuant to the Invesco Commitment Letter	If a quorum is present, a majority of the shares of Jaguar common stock represented at the special meeting, voting together as a single class, and entitled to vote.
4.	Approval of the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, issued by Jaguar to an institutional investor in the original principal amount of $2,155,000	If a quorum is present, a majority of the shares of Jaguar common stock represented at the special meeting, voting together as a single class, and entitled to vote.

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5. Approval of the amendment of the 2014 Plan to increase the number of shares of Jaguar common stock authorized for issuance under the 2014 Plan by 6,500,188 shares	Affirmative vote of a majority of the outstanding shares of Jaguar common stock represented at the special meeting, voting together as a single class, and entitled to vote.
6. Adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc."	Affirmative vote of a majority of the outstanding shares of Jaguar common stock represented at the special meeting, voting together as a single class, and entitled to vote.
7. Adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock.	Affirmative vote of a majority of the outstanding shares of Jaguar common stock represented at the special meeting, voting together as a single class, and entitled to vote.
8. Adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock.	Affirmative vote of a majority of the outstanding shares of Jaguar common stock represented at the special meeting, voting together as a single class, and entitled to vote.
9. Approval of the adjournment of the Jaguar special meeting, if necessary, to solicit additional proxies if there are not sufficient votes to approve the first seven proposals	Affirmative vote of a majority of the outstanding shares of Jaguar common stock, represented at the meeting, voting together as a single class, and entitled to vote if a quorum is present or a majority of the voting stock represented in person, by remote communication, or by proxy if a quorum is not present.

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Q:

What are the voting requirements to approve each of the proposals that will be voted on at the Napo special meeting?

A:

	Proposal	Vote Required
1.	Adoption of the merger agreement, and approval of the merger	Affirmative vote of a majority of the outstanding shares of Napo common stock, voting together as a single class, and entitled to vote
2.	Approval of adjournment of the Napo special meeting, if necessary, to solicit additional proxies if there are not sufficient votes to approve the first proposal	Affirmative vote of a majority of the shares of Napo common stock, represented at the special meeting, voting together as a single class, and entitled to vote if a quorum is present or a majority of the voting stock represented in person or by proxy if a quorum is not present

Q:

Does Jaguar's board of directors recommend that Jaguar stockholders approve the proposals regarding the merger including the issuance of shares of Jaguar common stock and non-voting common stock, the amendment of the 2014 Plan, and the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation?

A:

Yes. The board of directors of Jaguar (sometimes referred to as the Jaguar Board) has unanimously approved the merger agreement and the transactions contemplated thereby and determined that the issuance of shares of Jaguar common stock and non-voting common stock, the amendment of the 2014 Plan, and the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation as contemplated by the merger agreement is in the best interests of Jaguar. Therefore, the Jaguar Board unanimously recommends that you vote **"FOR"** the proposal respecting the issuance of shares of Jaguar common stock and non-voting common stock as contemplated by the merger agreement, **"FOR"** the proposal respecting the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, **"FOR"** the proposal respecting the issuance of shares of Jaguar common stock to Invesco pursuant to the Invesco Commitment Letter, **"FOR"** the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, **"FOR"** the proposal to amend the 2014 Plan, **"FOR"** the proposal to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change in the Jaguar corporate name to "Jaguar Health, Inc.", **"FOR"** the proposal to authorize a class of non-voting common stock, and **"FOR"** the proposal to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock. See "The Proposed Merger Recommendation of the Jaguar Board and its Reasons for the Merger" beginning on page 272 of this joint proxy statement/prospectus.

Q:

Does Napo's board of directors recommend that Napo stockholders adopt the merger agreement and the transactions contemplated thereby?

A:

Yes. The board of directors of Napo (sometimes referred to as the Napo Board) has unanimously approved the merger agreement and the transactions contemplated thereby, including the merger, and determined that these transactions are advisable and in the best interests of Napo and its stockholders. Therefore, the Napo Board unanimously recommends that you vote **"FOR"** the proposal to adopt the merger agreement and the transactions contemplated thereby at the Napo special meeting. See "The Proposed Merger Recommendation of the Napo Board and its

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Reasons for the Merger" beginning on page 274 of this joint proxy statement/prospectus. In considering the recommendation of the board of directors of Napo with respect to the merger agreement and the transactions contemplated thereby, including the merger, you should be aware that certain directors and executive officers of Napo are parties to agreements or are participants in other arrangements that give them interests that may be different from, or in addition to, your interests as a stockholder of Napo. It should be noted that certain members of the Napo Board have equity interests in Napo capital stock and that in connection with the merger, the Napo Board will receive indemnification for acts or omissions occurring prior to the effective time of the merger. You should consider these interests in voting on this proposal. These different interests are described under "Additional Interests of Certain of Jaguar and Napo's Directors and Executive Officers in the Merger Interests of the Napo Directors and Executive Officers in the Merger" beginning on page 296 of this joint proxy statement/prospectus.

Q:

What if my shares are held in "street name"?

A:

If some or all of your shares of Jaguar and/or Napo are held in "street name" by your broker, nominee, fiduciary or other custodian, you must provide your broker, nominee, fiduciary or other custodian with instructions on how to vote your shares; otherwise, your broker, nominee, fiduciary or other custodian will not be able to vote your shares on some of the proposals before your company's stockholders meeting.

As a result of the foregoing, please be sure to provide your broker, nominee, fiduciary or other custodian with instructions on how to vote your shares. Please check the voting form used by your broker, nominee, fiduciary or other custodian to see if it offers telephone or Internet submission of proxies.

Q:

What are abstentions and broker non-votes?

An "abstention" is the voluntary act of not voting by a stockholder who is present at a meeting in person or by proxy and entitled to vote. "Broker non-votes" refers to shares held by a brokerage firm or other nominee (for the benefit of its client) that are represented at the meeting, but with respect to which such broker or nominee is not instructed to vote on a particular proposal and does not have discretionary authority to vote on that proposal.

If you are a beneficial owner whose shares are held in street name and you do not submit voting instructions to your broker, your broker may generally vote your shares in its discretion on routine matters. However, pursuant to rules of The NASDAQ Stock Market (sometimes referred to as NASDAQ), brokers do not have the discretion to vote their clients' shares on non-routine matters, unless the broker receives voting instructions from the beneficial owner. All the Jaguar Proposals and Napo Proposals are considered non-routine matters. Consequently, if your shares are held in street name, you must provide your broker with instructions on how to vote your shares in order for your shares to be voted on each of Jaguar's Proposals or each Napo's Proposals, as applicable.

Brokers may not vote your shares on non-routine matters in the absence of your specific instructions as to how to vote, thus we strongly encourage you to provide instructions to your broker regarding the voting of your shares you hold in "street name" or through a broker or other nominee.

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Q:

If I am a record holder of my shares, what happens if I abstain from voting (whether by returning my proxy card or submitting my proxy by telephone or via the Internet) or I don't submit a proxy?

A:

Jaguar.

For the proposal to approve the issuance of shares of Jaguar common stock and non-voting common stock as contemplated by the merger agreement, an abstention or a failure to submit a proxy will not have an effect on the outcome of the vote for the proposal, but it will make it more difficult to meet the requirement under Jaguar's bylaws that the holders of a majority of the Jaguar common stock issued and outstanding and entitled to vote at the special meeting be present in person or by remote communication, if applicable, or represented by proxy to constitute a quorum at the special meeting.

For the proposal to approve the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, an abstention or a failure to submit a proxy will not have an effect on the outcome of the vote for the proposal.

For the proposal to approve the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to Invesco pursuant to the Invesco Commitment Letter, an abstention or a failure to submit a proxy will not have an effect on the outcome of the vote for the proposal.

For the proposal to approve the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, an abstention or a failure to submit a proxy will not have an effect on the outcome of the vote for the proposal.

For the proposal to amend the 2014 Plan, an abstention or failure to submit a proxy will have the same effect as a vote **"AGAINST"** such proposal.

For the proposal to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change in the Jaguar corporate name to "Jaguar Health, Inc.", an abstention or failure to submit a proxy will have the same effect as a vote **"AGAINST"** such proposal.

For the proposal to authorize a class of non-voting common stock, an abstention or failure to submit a proxy will have the same effect as a vote **"AGAINST"** such proposal.

For the proposal to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock, an abstention or failure to submit a proxy will have the same effect as a vote **"AGAINST"** such proposal.

For the proposal to adjourn the Jaguar special meeting, if necessary or advisable, an abstention will have the same effect as a vote cast **"AGAINST"** such proposal. A failure to submit a proxy will not have an effect on the outcome of the vote for the proposal.

Napo.

For the proposal to adopt the merger agreement, an abstention or a failure to submit a proxy will have the same effect as a vote **"AGAINST"** such proposal.

For the proposal to adjourn the Napo special meeting, if necessary or advisable, an abstention will have the same effect as a vote cast **"AGAINST"** such proposal. A failure to submit a proxy will not have an effect on the outcome of the vote for the proposal.

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Q:

What will happen if I return my proxy card without indicating how to vote?

A:

If you are a Jaguar stockholder of record and submit your proxy but do not make specific choices, your proxy will follow the Jaguar Board's recommendations and your shares will be voted **"FOR"** each of Jaguar's proposals.

If you are a Napo stockholder of record and submit your proxy but do not make specific choices with respect to the proposals, your proxy will follow Napo Board's recommendations and your shares will be voted **"FOR"** the proposal to adopt the merger agreement (under such circumstances, your proxy will constitute a waiver of your right of appraisal under Section 262 of the of the General Corporation Law of the State of Delaware (sometimes referred to as Section 262) and will nullify any previously delivered written demand for appraisal under Section 262), and **"FOR"** the proposal to adjourn the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to adopt the merger agreement and approve the merger.

Q:

What happens if I sell my shares after the record date but before the stockholders meeting?

A:

The record date for the Jaguar special meeting (the close of business on June 30, 2017) is earlier than the date of the Jaguar special meeting and earlier than the date that the merger is expected to be completed. If you sell or otherwise transfer shares of Jaguar stock after the record date but before the date of the Jaguar special meeting, you will retain your right to vote those shares at the Jaguar special meeting.

The record date for the Napo special meeting (the close of business on June 30, 2017) is earlier than the date of the Napo special meeting and earlier than the date that the merger is expected to be completed. If you sell or otherwise transfer shares of Napo common stock after the record date but before the date of the Napo special meeting, you will retain your right to vote those shares at the Napo special meeting. However, you will not have the right to receive the merger consideration in respect of those shares. In order to receive the merger consideration, you must hold your shares through completion of the merger.

Q:

What does it mean if I receive more than one set of materials?

A:

This means you may own shares of both Jaguar and Napo, or you may own shares of Jaguar or Napo that are registered under different names or held in different brokerage accounts. For example, you may own some shares directly as a stockholder of record and other shares through a broker or you may own shares through more than one broker. In these situations, you may receive multiple sets of proxy materials. It is necessary for you to vote, sign and return all of the proxy cards or follow the instructions for any alternative voting procedure on each of the proxy cards you receive in order to vote all of the shares you own. Each proxy card you receive will come with its own prepaid return envelope; if you submit your proxy by mail; make sure you return each proxy card in the return envelope which accompanied that proxy card.

Q:

Can I revoke my proxy and change my vote?

A:

Yes. You have the right to revoke your proxy at any time prior to the time your shares are voted at your stockholders meeting. If you are a stockholder of record, your proxy can be revoked in several ways:

by notifying your company's Corporate Secretary prior to the stockholders meeting that you are revoking your proxy;

by executing and delivering a later dated proxy card or, for Jaguar stockholders only, by submitting a later dated vote by telephone or by the Internet; or

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by attending your stockholders meeting and voting your shares in person.

However, if your shares are held in "street name" through a broker, nominee, fiduciary or other custodian, you must check with your broker, nominee, fiduciary or other custodian to determine how to revoke your proxy.

Q: **When and where are the stockholders meetings?**

A: The Jaguar special meeting will take place on July 27, 2017, at 2:30 p.m., local time, at 201 Mission Street, Suite 2375, San Francisco, CA 94105. The Napo special meeting will take place on July 27, 2017, at 9:00 a.m., local time, at 201 Mission Street, Suite 2375, San Francisco, CA 94105.

Q: **Who can attend the stockholders meetings? What must I bring to attend the stockholders meetings?**

A: Admittance to the Jaguar special meeting will require a valid photo identification, such as a driver's license or passport. Attendance at the meeting will be limited to stockholders of record as of the record date and one guest per stockholder. Stockholders whose shares are held in "street name" by a broker, nominee, fiduciary or other custodian should bring with them a copy of a brokerage statement reflecting stock ownership as of the record date, together with a valid photo identification. If you want to vote your shares of Jaguar common stock held in "street name" in person at the Jaguar special meeting, you will have to obtain a legal proxy in your name from the broker, nominee, fiduciary or other custodian who holds your shares.

Admittance to the Napo special meeting will require a valid photo identification, such as a driver's license or passport. Attendance at the meeting will be limited to stockholders of record as of the record date. Stockholders whose shares are held in "street name" by a broker, nominee, fiduciary or other custodian should bring with them a copy of a brokerage statement reflecting stock ownership as of the record date, together with a valid photo identification. If you want to vote your shares of Napo common stock held in "street name" in person at the Napo special meeting, you will have to obtain a legal proxy in your name from the broker, nominee, fiduciary or other custodian who holds your shares.

Q: **Who can answer any questions I may have about the stockholders meetings?**

A: Jaguar stockholders may call Computershare Trust Company N.A., Jaguar's transfer agent, toll-free at (800) 962-4284. Napo stockholders may call Computershare Investor Services (Jersey) at +44 370-7074040 or email #UKCSBRS.ExternalProxyQueries@computershare.co.uk.

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QUESTIONS AND ANSWERS ABOUT THE MERGER

The following are some questions that you, as a stockholder of Jaguar and/or Napo, may have regarding the merger, together with brief answers to those questions. Jaguar and Napo urge you carefully read this joint proxy statement/prospectus in its entirety, including the annexes and other documents attached and/or referred to in this joint proxy statement/prospectus, because the information in this section does not provide all of the information that will be important to you with respect to the merger.

Q: **What will happen in the merger?**

A: In the merger, Merger Sub will merge with and into Napo. Napo will be the surviving entity in the merger as a wholly-owned subsidiary of Jaguar. Thus, Jaguar will acquire Napo through the merger.

Q: **What are the conditions to the completion of the merger?**

A: Jaguar and Napo's obligation to effect the merger is subject to the satisfaction or waiver of various conditions, which include the following:

- the adoption of the merger agreement by Napo stockholders;
- the approval of (i) the issuance of shares of Jaguar common stock and non-voting common stock (Proposal 1), (ii) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc." (Proposal 6), (iii) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock (Proposal 7), and (iv) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock (Proposal 8);
- the absence of any law, order, decree, judgment, injunction or other legal restraint or prohibition entered, enacted, promulgated, enforced or issued by any governmental authority of competent jurisdiction making the merger illegal or otherwise preventing the consummation of the merger;
- the effectiveness of the registration statement of which this joint proxy statement/prospectus is a part and the absence of any stop order or proceedings initiated for that purpose;
- the approval of the listing of the Jaguar common stock to be issued in the merger on The NASDAQ Capital Market; and
- the filing of the Third Amended and Restated Certificate of Incorporation with the Delaware Secretary of State.

Each of Jaguar's and Napo's obligations to complete the merger is also separately subject to the satisfaction or waiver of the certain customary conditions. For a more complete discussion of the conditions to the merger, see "The Merger Agreement and Related Agreements Conditions to Completion of the Merger" beginning on page 311.

Q: **What will Jaguar stockholders receive in the merger?**

A:

The stockholders of Jaguar will continue to own their existing shares and the rights and privileges of their existing shares will not be affected by the merger. However, because Jaguar will be issuing new shares of Jaguar common stock and non-voting common stock to Napo creditors, and options, warrants and restricted stock units exercisable for Jaguar common stock to holders of Napo

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options, warrants and restricted stock units in the merger, the stockholders of Jaguar will experience dilution as a result of the issuance of shares in the merger and each outstanding share of Jaguar common stock immediately prior to the merger will represent a smaller percentage of the total number of shares of Jaguar common stock and non-voting common stock issued and outstanding after the merger. It is expected that Jaguar stockholders before the merger will hold approximately 25% of the total Jaguar common stock and non-voting common stock issued and outstanding on a fully diluted basis immediately following completion of the merger. Thus, Jaguar stockholders before the merger will experience dilution in the amount of approximately 75% as a result of the merger.

Q:

What will Napo stockholders receive in the merger for their shares?

A:

At the effective time of the merger, (i) each issued and outstanding share of Napo common stock (other than dissenting shares and shares held by Jaguar or Napo) will be converted into a contingent right to receive (x) up to a whole number of shares of Jaguar common stock comprising in the aggregate up to approximately 20.2% of the fully diluted shares of Jaguar common stock (sometimes referred to herein as the Merger Shares) immediately following the consummation of the merger, which contingent right will vest only if the resale of certain shares of Jaguar common stock issued by Jaguar to Nantucket in the Napo debt settlement (sometimes referred to herein as the Tranche A Shares) provides Nantucket with specified cash returns over a specified period of time (sometimes referred to herein as the Hurdle Amounts), and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units, (ii) existing creditors of Napo will be issued in the aggregate approximately 42,957,072 shares of Jaguar non-voting common stock and 2,282,445 shares of Jaguar voting common stock in full satisfaction of all existing indebtedness then owed by Napo to such creditors and (iii) an existing Napo stockholder will be issued an aggregate of approximately 3,243,243 shares of Jaguar common stock in return for $3 million of new funds invested into Jaguar by such investor, which will be immediately loaned to Napo to partially facilitate the extinguishment of the debt that Napo owes to Nantucket. The minimum Hurdle Amount needed for the vesting of the contingent rights will vary depending on a number of factors (including, among other things, the time period over which Nantucket receives specified cash returns in connection with the resale of the Tranche A Shares), and Napo stockholders may not receive any shares of Jaguar common stock in certain circumstances (including if the minimum Hurdle Amount is not satisfied). At the closing sales price of Jaguar common stock on the last trading day before the date of this joint proxy statement/prospectus, the resale of the Tranche A Shares to third parties would not provide Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount. Although the contingent rights will vest upon the satisfaction of the applicable Hurdle Amount, Jaguar may defer making the final determination of the shares issuable to the contingent right holders until the later of (i) the date when any and all indemnification claims timely made under the merger agreement are satisfied and (ii) April 1, 2020. For a discussion of the minimum Hurdle Amount and the calculation of the number of Merger Shares issuable to the holders of contingent rights, see "The Merger Agreement and Related Agreements Merger Consideration Calculation of Shares of Jaguar Common Stock Issuable to Holders of Contingent Rights" and *Annex E* to this joint proxy statement/prospectus.

Shares of Jaguar non-voting common stock have the same rights to dividends and other distributions and are convertible into shares of Jaguar common stock on a one-for-one basis (x) upon transfers to non-affiliates of Nantucket, (y) upon the release from escrow of certain non-voting shares held by Nantucket to the legacy stockholders of Napo under specified conditions and (z) at any time on or after April 1, 2018 at the option of the respective holders thereof.

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Jaguar will also assume (i) each outstanding and unexercised option to purchase Napo common stock, which will be converted into options to purchase Jaguar common stock, (ii) each outstanding warrant to purchase Napo common stock, which will be converted into warrants to purchase Jaguar common stock, and (iii) each outstanding restricted stock unit to acquire Napo common stock, which will be converted into restricted stock units to acquire Jaguar common stock.

Q:

Will any fractional shares be issued in connection with the merger?

A:

No fractional shares of Jaguar common stock or non-voting common stock will be issued. Instead, any fractional shares will be rounded down to the next whole number of shares. See "Risk Factors" beginning on page 32 of this joint proxy statement/prospectus.

Q:

When will Napo stockholders know whether their contingent rights to receive Jaguar common stock are exchangeable for shares of Jaguar common stock?

A:

A final determination as to the final number of Merger Shares, if any, that will be issued to holders of all contingent rights pursuant to the merger agreement, will be made no later than the later to occur of (x) the date on which both (a) the first anniversary of the consummation of the merger, which constitutes the expiration date of the representations, covenants and agreements in the merger agreement or in any writing delivered by Napo to Jaguar in connection with the merger agreement (such 12-month period following the consummation of the merger sometimes referred to herein as the Survival Period), has occurred, and (b) there are no outstanding claims for indemnification under Article VI of the merger agreement, and (y) the third anniversary of the date on which the merger is consummated (such later date referenced in clauses (x) and (y) above, sometimes referred to herein as the Final Determination Date).

Within 60 days of the Final Determination Date, solely to the extent holders of contingent rights are entitled to receive any Merger Shares under the terms of the Merger Agreement, Jaguar will mail to each contingent right holder (such date of mailing sometimes referred to as the Contingent Right Holders Notice Date) a letter of transmittal and instructions for use in effecting the surrender of such holder's Napo stock certificates representing the right to such Merger Shares in exchange for the Merger Shares. If you are a contingent right holder, you should carefully review and follow the instructions accompanying the letter of transmittal. The letter of transmittal will be mailed to each Napo stockholder on the record date. You will need to sign, date and complete the letter of transmittal and return it, along with your Napo stock certificates (or customary affidavits and indemnification regarding the loss or destruction of such certificates or the guaranteed delivery of such certificates), to the exchange agent, at the address and pursuant to the instructions given in the materials. The submission deadline is 5:00 p.m. Pacific Time on the one-year anniversary of the Contingent Right Holders Notice Date. If you do not submit a properly completed and signed letter of transmittal and surrender your Napo stock certificates to the exchange agent by the submission deadline, you will look only to Jaguar (subject to abandoned property, escheat and other similar laws) as a general creditor for payment of your claim for Merger Shares (if any) and any dividends or distributions with respect to Merger Shares. Jaguar will not be liable to any holder of Napo stock certificates (or dividends or distributions with respect thereto) or cash delivered to a public official pursuant to any applicable abandoned property, escheat or similar law.

Q:

Should I send in my Napo stock certificates now?

A:

No. The exchange agent will provide each Napo stockholder with a transmittal letter and instructions for surrendering each share of Napo common stock to the exchange agent in exchange for the merger consideration. See "The Merger Agreement and Related Agreements Conversion of Shares; Exchange of Certificates" beginning on page 306 of this joint proxy statement/prospectus

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for more information regarding the procedure for exchanging your Napo stock certificates for the merger consideration. Jaguar stockholders will keep their existing stock certificates.

Q: **What do I need to do now?**

A: After you carefully read this joint proxy statement/prospectus, please respond by completing, signing, dating and returning your signed proxy card(s) in the enclosed prepaid return envelope(s), or, for Jaguar stockholders only, by submitting your proxy by telephone or by the Internet, as soon as possible, so that your shares may be represented at your stockholders meeting. If you hold your shares in "street name" through a broker, nominee, fiduciary or other custodian, follow the directions given by the broker, nominee, fiduciary or other custodian regarding how to instruct them to vote your shares. In order to ensure that your vote is recorded, please submit your proxy as instructed on your proxy card(s) even if you currently plan to attend your stockholders meeting in person.

Q: **Why is my vote important?**

A: If you do not submit your proxy by returning your signed proxy card(s) by mail, voting in person at your stockholders meeting, or, for Jaguar stockholders only, by submitting your proxy by telephone or by the Internet, it will be more difficult for Jaguar and Napo to obtain the necessary quorum to hold their respective annual and special meeting and to obtain the stockholder approvals necessary for the completion of the merger. If a quorum is not present at the Jaguar special meeting or the Napo special meeting, the stockholders of that company will not be able to take action on any of the proposals at that meeting.

While a failure to submit a proxy or vote in person at the stockholders meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares will not affect the outcome of the vote on the proposal to approve the issuance of shares of Jaguar common stock and non-voting common stock (Proposals 1-4), a failure to submit a proxy or vote in person at the special meeting will make it more difficult to meet the requirement under Jaguar's bylaws that the holders of a majority of the shares of Jaguar common stock and entitled to vote at the special meeting be present in person or by proxy to constitute a quorum at the special meeting.

For the Jaguar stockholders to approve the amendment of the 2014 Plan (Proposal 5), a majority of the outstanding shares of common stock entitled to vote on such matter must approve such proposal; thus an abstention from voting, a failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares could have the same effect as a vote **"AGAINST"** the proposal.

For the proposal to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change in the Jaguar corporate name to "Jaguar Health, Inc." (Proposal 6), a majority of the outstanding shares of common stock entitled to vote on such matter must approve such proposal; thus an abstention from voting, a failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares will have the same effect as a vote **"AGAINST"** the proposal.

For the proposal to authorize a class of non-voting common stock (Proposal 7), a majority of the outstanding shares of common stock entitled to vote on such matter must approve such proposal; thus an abstention from voting, a failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable,

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with instructions on how to vote your shares will have the same effect as a vote **"AGAINST"** the proposal.

For the proposal to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock (Proposal 8), a majority of the outstanding shares of common stock entitled to vote on such matter must approve such proposal; thus an abstention from voting, a failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares will have the same effect as a vote **"AGAINST"** the proposal.

For the Napo stockholders to adopt the merger agreement and approve the merger, a majority of the outstanding shares of common stock entitled to vote on such matter must approve such proposal; thus an abstention from voting, a failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares could have the same effect as a vote **"AGAINST"** the proposal.

Your vote is very important. Jaguar and Napo cannot complete the merger unless (i) holders of Jaguar common stock approve the share issuances in connection with the transactions contemplated by the merger agreement, (ii) holders of Jaguar common stock approve the amendment of the 2014 Plan, (iii) holders of Jaguar common stock approve the increase in the number of authorized shares of common stock from 50 million shares to 300 million shares and change in the Jaguar corporate name to "Jaguar Health, Inc.", (iv) holders of Jaguar common stock approve the authorization of a class of non-voting common stock, (v) holders of Jaguar common stock approve the requirement to obtain Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock, and (iv) Napo stockholders adopt the merger agreement and approve the merger.

Q: **Why have Jaguar and Napo agreed to the merger?**

A: The board of directors and management team of each of Jaguar and Napo believe the merger to provide substantial strategic and financial benefits to their stockholders, customers and other stakeholders, including, among others:

- expected synergies and economies of scale in manufacturing and commercialization of crofelemer for various human and animal indications;
- the centrality of Napo's technology for proprietary gastrointestinal disease products to both Jaguar and Napo;
- expected support to the development of crofelemer to address the problem of chemotherapy-induced diarrhea in both humans and companion animals;
- expected efficiencies of combining the skillsets of the highly complementary Napo and Jaguar teams;
- the strong foundation for collaborations resulting from the combined company's possession of global unencumbered rights to Mytesi and a host of crofelemer-based human products, combined with horizontal product leverage to multiple animal species; and
- learning, modeling and efficiencies provided by the weaving of clinical indications between humans and animals.

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Additional information on the reasons for the merger can be found below, beginning on page 272 of this joint proxy statement/prospectus for Jaguar and beginning on page 274 of this joint proxy statement/prospectus for Napo.

Q:

Why is Jaguar asking to amend the 2014 Plan to increase the number of shares of Jaguar common stock authorized for issuance under the 2014 Plan?

A:

Under the merger agreement, Jaguar will assume (i) each outstanding and unexercised option to purchase Napo common stock, which will be converted into options to purchase Jaguar common stock, (ii) each outstanding warrant to purchase Napo common stock, which will be converted into warrants to purchase Jaguar common stock, and (iii) each outstanding restricted stock unit to acquire Napo common stock, which will be converted into restricted stock units to acquire Jaguar common stock. Currently, Jaguar does not have a sufficient number of shares authorized for issuance under the 2014 Plan to cover the conversion of these Napo securities into Jaguar securities. Therefore, Jaguar must amend the 2014 Plan to authorize the issuance of additional shares so that Jaguar can meet its obligations to holders of the Napo options, warrants and restricted stock units under the merger agreement.

Q:

Why is Jaguar asking to adopt its Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares, authorize a class of non-voting common stock, require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock, and change the Jaguar corporate name to "Jaguar Health, Inc."?

A:

Approval of Jaguar's Third Amended and Restated Certificate of Incorporation (i) to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc." (which is the subject of Jaguar Proposal No. 6), (ii) to authorize a class of non-voting common stock (which is the subject of Jaguar Proposal No. 7), and (iii) to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock (which is the subject of Jaguar Proposal No. 8) is one of the conditions to the consummation of the merger. The merger consideration consists of a contingent right to receive Jaguar common stock for holders of Napo common stock and Jaguar common stock and non-voting common stock for Napo's creditors; thus, Jaguar must amend its Certificate of Incorporation to increase the number of authorized shares of common stock and to create this class of non-voting common stock. Shares of Jaguar non-voting common stock are the same in all respects to shares of Jaguar's common stock except that holders of shares of non-voting common stock are not entitled to vote on matters submitted to Jaguar stockholders other than a change of control of Jaguar, and shares of non-voting common stock are convertible into shares of common stock on a one-for-one basis (i) at the option of the respective holders thereof, at any time and from time to time on or after April 1, 2018 or (ii) automatically, without any payment of additional consideration by the holder thereof, (x) upon a transfer of such shares to any person or entity that is neither an affiliate of Nantucket nor an investment fund, investment vehicle or other account, that is, directly or indirectly, managed or advised by Nantucket or any of its affiliates pursuant to a sale of such stock to a third-party for cash in accordance with the terms and condition set forth in the Investor Rights Agreement, or (y) upon the release or transfer of such shares to the registered holders of Napo's outstanding shares of common stock immediately prior to the consummation of the merger (such shareholders sometimes referred to herein as the Napo Legacy Stockholders).

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Q:

When do you expect the merger to be completed?

A:

Jaguar and Napo hope to complete the merger as soon as reasonably practicable, subject to receipt of stockholder approvals, which are proposals presented at the Jaguar special meeting and the Napo special meeting, and necessary regulatory approvals. Jaguar and Napo currently expect that the transaction will be completed by the end of July 2017. However, Jaguar and Napo cannot predict when regulatory review will be completed, whether or when regulatory or stockholder approval will be received or the potential terms and conditions of any regulatory approval that is received. In addition, certain other conditions to the merger, some of which are outside of the control of Jaguar and Napo, may not be satisfied until later in 2017 or at all. For a discussion of the conditions to the completion of the merger and of the risks associated with obtaining regulatory approvals in connection with the merger, see "The Merger Agreement and Related Agreements Conditions to Completion of the Merger" beginning on page 311 of this joint proxy statement/prospectus and "The Proposed Merger Regulatory Matters Relating to the Merger" beginning on page 293 of this joint proxy statement/prospectus.

Q:

Will the merger be taxable to stockholders of Jaguar?

A:

No, the merger will not be taxable to stockholders of Jaguar, as they will continue to own their existing shares and the rights and privileges of their existing shares will not be affected by the merger.

Q:

Will the merger be taxable to stockholders of Napo?

A:

The merger will not qualify as a tax-free reorganization within the meaning of Section 368 of the Internal Revenue Code of 1986, as amended (sometimes referred to as the Code). Although it is not free from doubt, a Napo Stockholder should not recognize any taxable gain or loss until such Napo Stockholder's Certificate Delivery Date. The term "Certificate Delivery Date" means, with respect to each Napo Stockholder, the date on which such Napo Stockholder delivers to the Exchange Agent his, her or its Napo stock certificate(s) for cancellation, together with a letter of transmittal duly executed and completed in accordance with its terms and such other documents and/or payments of withholding taxes as may be reasonably required by the Exchange Agent or Jaguar. At that time, such Napo Stockholder will recognize gain or loss from the sale of his, her or its shares of Napo common stock in an amount equal to the difference between (i) the fair market value of a Merger Share on such Napo Stockholder's Certificate Delivery Date multiplied by the number of Merger Shares received by such Napo Stockholder (sometimes referred to as the Purchase Price) and (ii) such Napo Stockholder's tax basis in his, her or its shares of Napo common stock surrendered in the merger. Any such capital gain or capital loss will constitute long-term capital gain or loss if the Napo Stockholder's holding period for his, her or its shares of Napo common stock is more than one year as of the effective date of the merger. In addition, a portion of the Purchase Price received by each Napo Stockholder will constitute imputed interest that will be taxed at ordinary rates pursuant to Section 483 of the Code. The imputed interest rules of Section 483 apply regardless of whether a Napo Stockholder recognizes taxable gain or loss on the merger. However, if a Napo Stockholder recognizes capital gain on the merger, the amount of such capital gain is reduced dollar-for-dollar by the amount of the Napo Stockholder's imputed interest, and if a Napo Stockholder recognizes a capital loss on the merger, the amount of such capital loss will be increased dollar-for-dollar by the amount of the Napo Stockholder's imputed interest.

Q:

Will there be any changes to the Jaguar Board if the merger becomes effective?

A:

No. The merger agreement provides that the merger will not result in any change to the composition of the Jaguar Board. For more information, please see the section entitled

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"Management of the Combined Company After the Merger" beginning on page 209 of this joint proxy statement/prospectus.

Q:

Are there any Jaguar or Napo stockholders already committed to vote in favor of the merger-related proposals?

A:

Jaguar and Napo expect their respective executive officers and board members who own shares in the respective companies to vote in favor of the merger-related proposals. In addition, Napo, which owns in the aggregate approximately 17% of Jaguar common stock, is expected to vote in favor of the merger-related proposals.

Q:

What happens if Jaguar stockholders fail to approve the issuances of shares of Napo common stock and non-voting common stock, amend the 2014 Plan, or adopt Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock, to authorize a class of non-voting common stock, and require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock as contemplated by the merger agreement?

A:

In this circumstance, either party is permitted to terminate the merger agreement, and no termination fee is payable by either Jaguar or Napo if the merger agreement is terminated upon the occurrence of this event. However, if the merger fails to close for any reason on or prior to July 31, 2017, other than as a result directly or indirectly of (x) lack of stockholder approval by either party or (y) Napo's failure to comply with, or breach of the provisions of the terms of the Binding Agreement of Terms for Jaguar Animal Health, Inc. Acquisition of Napo Pharmaceuticals, Inc., dated February 8 , 2017, between Jaguar and Napo (sometimes referred to herein as the Binding Agreement of Terms) or the merger documents, then on or before the close of business on August 7, 2017, Jaguar will issue 2,000,000 shares of its restricted common stock to Napo. See "The Merger Agreement and Related Agreements Termination" and " Termination Fee and Expenses" beginning on pages 313 and 314, respectively.

Except as set forth above, whether or not the merger is completed, all costs and expenses incurred in connection with the merger agreement and the transactions contemplated by the merger agreement will be paid by the party incurring those costs or expenses.

Q:

What happens if Napo stockholders fail to adopt the merger agreement and the transactions contemplated thereby?

A:

In this circumstance, either party is permitted to terminate the merger agreement, and no termination fee is payable by either Napo or Jaguar if the merger agreement is terminated upon the occurrence of this event. See "The Merger Agreement and Related Agreements Termination" and " Termination Fee and Expenses" beginning on pages 313 and 314, respectively.

Q:

Am I entitled to exercise appraisal rights instead of receiving the per share merger consideration for my shares of Napo common stock?

A:

Napo stockholders are entitled to appraisal rights under Section 262, provided they fully comply with and follow the procedures and satisfy the conditions set forth in Section 262. For more information regarding appraisal rights, see the section entitled "Appraisal Rights" beginning on page 31 of this joint proxy statement/prospectus. In addition, a copy of Section 262 is attached as *Annex D* to this joint proxy statement/prospectus. Failure to comply with Section 262 will result in your waiver of, or inability to exercise, appraisal rights.

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Q:

Are there risks that I, as a Jaguar stockholder, should consider in deciding to vote on the issuances of shares of Jaguar common stock and non-voting common stock, the amendment of the 2014 Plan, and the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock, to authorize a class of non-voting common stock, and require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock as contemplated by the merger agreement or, as a Napo stockholder, should consider in deciding to vote on the adoption of the merger agreement?

A:

Yes. In evaluating the approval of the issuance of shares of Jaguar common stock and non-voting common stock, the amendment of the 2014 Plan, and/or the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock, to authorize a class of non-voting common stock, and require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock as contemplated by the merger agreement, you should carefully read this joint proxy statement/prospectus, including the risk factors discussed in the section entitled "Risk Factors" beginning on page 32 of this joint proxy statement/prospectus.

Q:

Who can answer any questions I may have about the merger?

A:

Jaguar stockholders may call Computershare Trust Company, N.A., Jaguar's transfer agent, toll-free at (800) 962-4284. Napo stockholders may call Computershare Investor Services (Jersey) at +44 370-7074040 or email #UKCSBRS.ExternalProxyQueries@computershare.co.uk.

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SUMMARY THE MERGER

This summary highlights selected information contained in this joint proxy statement/prospectus and does not contain all the information that may be important to you. Jaguar and Napo urge you to read carefully this joint proxy statement/prospectus in its entirety, including the Annexes. Unless stated otherwise, all references in this joint proxy statement/prospectus to Jaguar refer to Jaguar Animal Health, Inc., a Delaware corporation, all references to Napo refer to Napo Pharmaceuticals, Inc., a Delaware corporation, all references to Merger Sub refer to Napo Acquisition Corporation, a Delaware corporation, and all references to the merger agreement refer to the Agreement and Plan of Merger, dated as of March 31, 2017, by and among Jaguar, Merger Sub, Napo and a Napo representative, a copy of which is attached as Annex A to this joint proxy statement/prospectus and is incorporated by reference into this joint proxy statement/prospectus. See "Where you Can Find More Information" beginning on page 342.

The Companies Involved in the Merger

Jaguar

Jaguar Animal Health, Inc.
201 Mission Street, Suite 2375
San Francisco, CA 94105
(415) 371-8300

Jaguar is an animal health company focused on developing and commercializing first-in-class gastrointestinal products for companion and production animals, foals, and high value horses. Jaguar was founded in San Francisco, California as a Delaware corporation on June 6, 2013. Napo formed Jaguar to develop and commercialize animal health products. Effective as of December 31, 2013, Jaguar was a wholly-owned subsidiary of Napo, and until May 13, 2015, Jaguar was a majority-owned subsidiary of Napo.

For additional information about Jaguar, see "Jaguar Business" beginning on page 95.

Napo

Napo Pharmaceuticals, Inc.
201 Mission Street, Suite 2375
San Francisco, CA 94105
(415) 963-9938

Napo Pharmaceuticals, Inc. ("Napo") focuses on the development and commercialization of proprietary pharmaceuticals for the global marketplace from plants traditionally used in rainforest areas. In October 2016 Napo launched Mytesi (formerly known as Fulyzaq), a human drug approved by the U.S. FDA for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy (ART). The active pharmaceutical ingredient (API) in Mytesi is crofelemer, Napo's proprietary, patented gastrointestinal anti-secretory agent sustainably harvested from the rainforest. Napo was founded in San Francisco, California as a Delaware corporation on November 15, 2001.

For additional information about Napo, see "Napo Business" beginning on page 127.

Merger Sub

Merger Sub, a wholly-owned subsidiary of Jaguar, is a Delaware corporation formed on March 30, 2017 for the sole purpose of effecting the merger. Upon completion of the merger, Merger Sub will merge with and into Napo, with Napo surviving as a wholly-owned subsidiary of Jaguar after the merger.

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The Proposed Merger

Each of the Jaguar Board and Napo Board has approved the merger of Jaguar and Napo. Jaguar and Napo have entered into the merger agreement pursuant to which Napo will merge with Merger Sub, a newly formed, wholly-owned subsidiary of Jaguar, with Napo surviving the merger as a wholly-owned subsidiary of Jaguar. At the effective time of the merger, (i) each issued and outstanding share of Napo common stock (other than dissenting shares and shares held by Jaguar or Napo) will be converted into a contingent right to receive (x) up to a whole number of shares of Jaguar common stock comprising in the aggregate up to approximately 20.2% of the fully diluted shares of Jaguar common stock immediately following the consummation of the merger, which contingent right will vest only if the resale of the Tranche A Shares to third parties provides Nantucket with specified cash returns over a specified period of time (sometimes referred to herein as the Hurdle Amounts), and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units, (ii) existing creditors of Napo (inclusive of Nantucket) will be issued in the aggregate approximately 42,957,072 shares of Jaguar non-voting common stock and 2,282,445 shares of Jaguar voting common stock in full satisfaction of all existing indebtedness then owed by Napo to such creditors, and (iii) an existing Napo stockholder (sometimes referred to herein as Invesco) will be issued an aggregate of approximately 3,243,243 shares of Jaguar common stock in return for $3 million of new funds invested into Jaguar by such investor, which will be immediately loaned to Napo to partially facilitate the extinguishment of the debt that Napo owes to Nantucket.

Shares of Jaguar non-voting common stock have the same rights to dividends and other distributions and are convertible into shares of common stock on a one-for-one basis (x) upon transfers to non-affiliates of Nantucket, (y) upon the release from escrow of certain non-voting shares held by Nantucket to the legacy stockholders of Napo under specified conditions and (z) at any time on or after April 1, 2018 at the option of the respective holders thereof.

Jaguar will assume (i) each outstanding and unexercised option to purchase Napo common stock, which will be converted into options to purchase Jaguar common stock, (ii) each outstanding warrant to purchase Napo common stock, which will be converted into warrants to purchase Jaguar common stock, and (iii) each outstanding restricted stock unit to acquire Napo common stock, which will be converted into restricted stock units to acquire Jaguar common stock.

The stockholders of Jaguar will continue to own their existing shares and the rights and privileges of their existing shares will not be affected by the merger. However, because Jaguar will be issuing new shares of Jaguar common stock and non-voting common stock to Napo creditors, contingent rights to receive Jaguar common stock to Napo stockholders, and options, warrants and restricted stock units exercisable for Jaguar common stock to holders of Napo options, warrants and restricted stock units in the merger, the stockholders of Jaguar will experience dilution as a result of the issuance of shares in the transactions contemplated by the merger and each outstanding share of Jaguar common stock immediately prior to the merger will represent a smaller percentage of the total number of shares of Jaguar common stock and non-voting common stock issued and outstanding after the merger. It is expected that Jaguar stockholders before the merger will hold approximately 25% of the total Jaguar common stock and non-voting common stock issued and outstanding immediately following completion of the merger. Thus, Jaguar stockholders before the merger will experience dilution in the amount of 75% as a result of the merger.

A copy of the merger agreement is attached as *Annex A* to this joint proxy statement/prospectus. Jaguar and Napo encourage you to read the entire merger agreement carefully because they are the principal documents governing the merger. For more information on the merger agreement, see "The Merger Agreement and Related Agreements" beginning on page 300.

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The merger is expected to be completed by the end of July 2017, subject to the satisfaction or waiver of the closing conditions.

Merger Consideration

At the effective time of the merger:

(i) each issued and outstanding share of Napo common stock (other than dissenting shares and shares held by Jaguar or Napo) will be converted into a contingent right to receive (x) up to a whole number of shares of Jaguar common stock comprising in the aggregate up to approximately 20.2% of the fully diluted shares of Jaguar common stock immediately following the consummation of the merger, which contingent right will vest only if the resale of the Tranche A Shares to third parties provides Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units;

(ii) existing creditors of Napo will receive an aggregate of not more than 2,282,445 shares of Jaguar common stock and not more than 42,957,072 shares of Jaguar non-voting common stock in full satisfaction of all existing indebtedness then owed by Napo to such creditors;

(iii) an existing Napo stockholder will be issued an aggregate of 3,243,243 shares of Jaguar common stock in return for $3 million of new funds invested into Jaguar by such investor, which will be immediately loaned to Napo to partially facilitate the extinguishment of the debt that Napo owes to Nantucket;

(iv) each option to purchase shares of Napo common stock outstanding and unexercised immediately prior to the effective time of the merger will be assumed by Jaguar and will become an option to purchase shares of Jaguar common stock, with the number of shares subject to each such option equal to the product of the number of shares of Napo common stock previously subject to the Napo option and 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger), rounded down to the next whole share;

(v) each warrant to purchase shares of Napo common stock outstanding and unexercised immediately prior to the effective time of the merger will be assumed by Jaguar and will become a warrant to purchase shares of Jaguar common stock, with the number of shares subject to each such warrant equal to the product of the number of shares of Napo common stock previously subject to the Napo warrant and 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger), rounded down to the next whole share; and

(vi) each restricted stock unit to acquire shares of Napo common stock outstanding and unexercised immediately prior to the effective time of the merger will be assumed by Jaguar and will become a restricted stock unit to acquire shares of Jaguar common stock, which will be governed by the terms of the Jaguar 2014 Stock Plan.

Based upon the current number of issued and outstanding shares of Napo common stock, an aggregate of approximately 69,299,346 shares of Jaguar common stock and non-voting common stock will be issued upon the closing of the merger on a fully diluted basis, assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or

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more. Jaguar will not issue any fractional shares in the merger. Instead, any fractional shares will be rounded down to the next whole number of shares.

For a more complete description of the merger consideration, see "The Merger Agreement and Related Agreements Merger Consideration" beginning on page 300.

Calculation of Shares of Jaguar Common Stock Issuable to Holders of Contingent Rights

In exchange for Nantucket's agreement to a discounted payoff of the debt owed to Nantucket by Napo, the right of the stockholders of Napo to receive Merger Shares is subject to Nantucket receiving net proceeds from the sale of Tranche A Shares (and Tranche B Shares, if applicable) in excess of certain Hurdle Amounts.

The Hurdle Amounts vary depending on (i) the amount of cash paid by Napo to Nantucket upon closing of the merger to extinguish debt that Napo owes as part of the payments to Nantucket (sometimes referred to herein as the Cash Repayment Amount), (ii) the length of time that has passed since the closing, and (iii) the amount of cash proceeds that Nantucket receives from sales of Tranche A Shares (and Tranche B Shares, if applicable) during the prior time periods.

Cash Repayment Amount. If the Tranche B Shares to be issued to Nantucket at the closing of the merger represent 17.4% or more of the outstanding capital stock of Jaguar (on a fully diluted basis but excluding one half of the options, warrants and other securities that are convertible into capital stock of Jaguar at a price of $5.00 per share or more), the Cash Repayment Amount will be $8 million. If the Tranche B Shares to be issued to Nantucket at the closing of the merger represent less than 17.4% of the outstanding capital stock of Jaguar (on a fully diluted basis but excluding one half of the options, warrants and other securities that are convertible into capital stock of Jaguar at a price of $5.00 per share or more), the Cash Repayment Amount will be $8.5 million. It is currently anticipated that the Tranche B Shares will represent 17.4% or more of the outstanding capital stock of Jaguar and therefore the Cash Repayment Amount will be $8 million.

Time Period. The Hurdle Amount increases over time, with the initial Hurdle Amount applicable from April 1, 2017 (sometimes referred to herein as the Trigger Date) until April 1, 2018 and increasing for each six-month period thereafter (each sometimes referred to herein as a time period) until April 1, 2020 (i.e., 36 months after the Trigger Date).

Cash Proceeds from Prior Periods. The applicable Hurdle Amount in time periods 2 through 5 listed in the table below are subject to decrease for any net proceeds received by Nantucket from the sale of the Tranche A Shares (and/Tranche B Shares, if applicable) during the prior time periods.

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The table summarizes the minimum Hurdle Amounts needed for the contingent rights to vest.

Time Period	Hurdle Amount Assuming Cash Repayment Amount of $8 M	Hurdle Amount Assuming Cash Repayment Amount of $8.5 M
Period 1 (From April 1, 2017 (the "Trigger Date") to 12 months after the Trigger Date)	$ 20,250,000	$ 20,000,000
Period 2 (From the first day that is 12 months after the Trigger Date to 18 months after the Trigger Date)	$ 27,843,750	$ 27,500,000
Period 3 (From the first day that is 18 months after the Trigger Date to 24 months after the Trigger Date)	$ 35,437,500	$ 35,000,000
Period 4 (From the first day that is 24 months after the Trigger Date to 30 months after the Trigger Date)	$ 40,500,000	$ 40,000,000
Period 5 (From the first day that is 30 months after the Trigger Date to 36 months after the Trigger Date)	$ 45,562,500	$ 45,000,000

If Nantucket sells all of its Tranche A Shares and the net proceeds do not meet the applicable Hurdle Amount, Nantucket is obligated to sell Tranche B Shares to any potential purchaser if the sale price is above the applicable Minimum Share Price (as defined below) or the sale would cause the applicable Hurdle Amount to be met. If the applicable Hurdle Amount is met, any remaining Tranche B Shares would be distributed to the Napo stockholders pursuant to their contingent rights. In addition, if less than all of the Tranche B Shares are ultimately distributed to the Napo stockholders, the RSU Indemnitors (i.e., certain holders of Napo RSUs who agree to become "RSU Indemnitors" and to be bound by the indemnification obligations of RSU Indemnitors set forth in the merger agreement) will forfeit to the holders of contingent rights a portion of the shares issuable under their Jaguar RSUs. At the closing sales price of Jaguar common stock on the last trading day before the date of this joint proxy statement/prospectus, the resale of the Tranche A Shares to third parties would not provide Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount.

Sale Restriction Minimum Share Price

From the closing of the merger until the earlier of (i) April 1, 2020 and (ii) the date, if any, on which the aggregate net proceeds from sales of the Tranche A Shares exceed the applicable Hurdle Amount, Nantucket is obligated to sell some or all of its Tranche A Shares if the sale price is above the minimum per share price sufficient to satisfy the Hurdle Amount in effect at the time of the sale (the "Minimum Share Price" as defined in and subject to calculation and adjustment as specified in the Investor Rights Agreement). Until April 1, 2018, the Minimum Share Price is approximately $1.10 per share and will increase thereafter as the Hurdle Amount increases.

Hypothetical Sale Scenario At Minimum Share Price

For purposes of illustration only, if Nantucket is able to sell 18,409,091 Tranche A Shares for average net proceeds of $1.10 per share (which is the minimum share price at which Nantucket is obligated to sell Jaguar's common stock prior to April 1, 2018), the applicable Hurdle Amount of $20,250,000 would be satisfied and all 19,900,202 Tranche B Shares would be distributed to Napo stockholders along with an additional 27,223 shares of Jaguar common stock from the "excess" Tranche A Shares (which the Napo stockholders are entitled to share in pursuant to the terms of the Investor Rights Agreement). As a result, each share of Napo common stock would be entitled to receive 0.1842 shares of Jaguar common stock which would have a value of $0.2025 based upon the assumed $1.10 per share price.

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Sale Restriction Floor Price Jaguar's Consent

Pursuant to the Investor Rights Agreement, until April 1, 2018, Nantucket cannot sell any Tranche A Shares for a price which is below the greater of (i) $1.00 per share and (ii) the product obtained by multiplying 0.85 by the arithmetic average of the volume weighted average price of Jaguar shares during the ten consecutive trading day period prior to the proposed sale (sometimes referred to herein as the Floor Price), without Jaguar's consent.

Hypothetical Sale Scenario At Price Not Requiring Jaguar's Consent

For purposes of illustration only, if Nantucket is able to sell all 18,479,826 Tranche A Shares and 1,770,174 Tranche B Shares on or before April 1, 2018 for average net proceeds of $1.00 per share (which is the Floor Price below which Nantucket cannot sell Jaguar's common stock prior to April 1, 2018 without Jaguar's consent), the applicable Hurdle Amount of $20,250,000 would be satisfied and the remaining 18,130,028 Tranche B Shares would be distributed to Napo stockholders along with an additional 342,129 shares of Jaguar common stock forfeited by the RSU Indemnitors to the Napo stockholders pursuant to the contingent rights (assuming the RSU Indemnitors have not had to satisfy any indemnification claims under the merger agreement). As a result, each share of Napo common stock would be entitled to receive 0.1707 shares of Jaguar common stock, which would have a value of $0.1707 based upon the assumed $1.00 per share price.

If the Hurdle Amount is not achieved by April 1, 2020, the contingent right to the Tranche B Shares will not vest and the Napo stockholders will not be entitled to receive any Tranche B Shares. If this were to occur, and assuming the same number of Tranche B Shares and RSUs held by the RSU Indemnitors as in the example in the preceding paragraphs, the RSU Indemnitors would then forfeit to the Napo stockholders pursuant to their contingent rights, an aggregate of 3,846,192 shares of Jaguar common stock otherwise issuable under the RSUs, or approximately 0.0355 shares of Jaguar common stock for every share of Napo common stock (assuming the RSU Indemnitors have not had to satisfy any indemnification claims from the Parent Indemnitees). If the RSU Indemnitors need to satisfy indemnification claims to the full extent of their Jaguar RSUs, then Napo stockholders may not receive any shares of Jaguar common stock.

Note that these are merely hypothetical examples based on the assumption that the total number of Tranche A Shares, Tranche B Shares, and shares issuable under the Jaguar RSUs to the Napo RSU holders (including the shares issuable under the Jaguar RSUs held by the RSU Indemnitors) that are subject to forfeiture are 18,479,826 shares, 19,990,202 shares and 5,953,557 shares (of which 4,767,656 are held by the RSU Indemnitors), respectively, and the stock net sale price is $1.10 and $1.00 per share, respectively, and that no indemnification claims are made by the Purchaser Indemnitees under the merger agreement. There are factors which could alter the number of Tranche A Shares and Tranche B Shares issued to Nantucket at the closing of the merger or the number of shares issuable under the Jaguar RSUs issued at the closing of the merger to the Napo RSU holders (including the shares issuable under the Jaguar RSUs held by the RSU Indemnitors), including the consummation of one or more financing transactions by Jaguar and/or Napo during the period between the execution of the merger agreement and the consummation of the merger. Furthermore, there are many factors that may make it impracticable for Nantucket to sell a sufficient number of shares to meet the applicable Hurdle Amount, or cause the net sales price of Jaguar common stock to be less than the assumed sale price, including the sale of the large number of shares necessary to meet the applicable Hurdle Amount as well as other issues identified in the section entitled "Risk Factors" beginning on page 32 of this joint proxy statement/prospectus. See *Annex E* to this joint proxy statement/prospectus for more information regarding the calculation of the foregoing amounts and examples using other assumptions. Note that the applicable Hurdle Amounts are determined net of any commissions or other selling costs incurred by Nantucket and fractional shares are rounded down and are not to be issued pursuant to the merger agreement.

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Treatment of Stock Options and Warrants

Jaguar will assume outstanding options and warrants to purchase shares of Napo common stock in the merger. Each outstanding option and warrant to acquire Napo common stock will be converted automatically at the effective time of the merger into an option or warrant to acquire Jaguar common stock. Each option will thereafter be governed by the terms of the 2014 Jaguar Stock Incentive Plan. The number of shares of Jaguar common stock for which each option or warrant is exercisable will be equal to the product of the number of shares of Napo common stock previously subject to the Napo option or warrant and 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger), rounded down to the next whole share, and the exercise price of each option or warrant will be equal to the exercise price for each share of Napo common stock previously subject to the option or warrant immediately prior to completion of the merger, divided by 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger), rounded up to the nearest whole cent. In addition, the vesting and forfeiture provisions applicable to the converted options shall remain the same as the Napo options. As of March 31, 2017, there were outstanding options and warrants to purchase up to 9,711,443 shares of Napo common stock, at exercise prices of $0.10 to $0.55328. For a more complete discussion of the treatment of Napo options and other stock-based awards, see "The Merger Agreement and Related Agreements Treatment of Napo Options and Warrants" beginning on page 305.

Directors and Executive Management of Jaguar Following the Merger

The current board of directors and executive management of Jaguar will remain unchanged following the merger.

For a more complete discussion of the directors and management of Jaguar after the merger, see "Management of the Combined Company After the Merger" beginning on page 209.

Recommendation of the Jaguar Board

After careful consideration, the Jaguar Board unanimously recommends that holders of Jaguar common stock vote **"FOR"** the issuance of Jaguar common stock and non-voting common stock in connection with the merger, vote **"FOR"** the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, vote **"FOR"** the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to Invesco pursuant to the Invesco Commitment Letter, vote **"FOR"** the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, **"FOR"** the amendment of the 2014 Plan, vote **"FOR"** the proposal to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change in the Jaguar corporate name to "Jaguar Health, Inc.", vote **"FOR"** the proposal to authorize a class of non-voting common stock, and vote **"FOR"** the proposal to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock, and vote **"FOR"** the adjournment of the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to approve all matters brought before the meeting.

For a more complete description of Jaguar's reasons for the merger and the recommendations of the Jaguar Board, see "The Proposed Merger Recommendation of the Jaguar Board and its Reasons for the Merger" beginning on page 272.

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Recommendation of the Napo Board

After careful consideration, the Napo Board unanimously recommends that holders of Napo common stock vote **"FOR"** the adoption of the merger agreement and approval of the merger and vote **"FOR"** the adjournment of the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to adopt the merger agreement and approve the merger. It should be noted that in connection with the merger, the Napo Board will receive indemnification for acts or omissions occurring prior to the effective time of the merger. The merger agreement also provides that, from and after the effective time of the merger, Napo will provide exculpation, indemnification and advancement expenses for each former director, officer, employee or agent of Napo to cover actions at or prior to the effective time of the merger, including all transactions contemplated by the merger agreement, which is at least as favorable in scope and amount as the exculpation, indemnification and advancement of expenses provided to such former director, officer, employee or agent of Napo prior to the effective time of the merger.

For a more complete description of Napo's reasons for the merger and the recommendation of the Napo Board, see "The Proposed Merger Recommendation of the Napo Board and its Reasons for the Merger" beginning on page 274.

Opinion of Jaguar Financial Advisor

In connection with the merger and certain related transactions described in the merger agreement (sometimes referred to herein collectively as the Transaction), the Jaguar Board received a written opinion from Stifel, Nicolaus & Company, Incorporated (sometimes referred to as Stifel), as to the fairness, from a financial point of view and as of the date of its opinion, to Jaguar of the transaction consideration (as described in the opinion) to be issued by Jaguar in the Transaction (as described in the opinion). The full text of Stifel's written opinion, dated March 28, 2017, is attached to this joint proxy statement/prospectus as *Annex C*. Holders of Jaguar common stock are encouraged to read this opinion carefully in its entirety for a description of the assumptions made, procedures followed, matters considered and limitations on the review undertaken. **Stifel's Opinion was for the information of, and directed to, the Jaguar Board for its information and assistance in connection with its consideration of the financial terms of the Transaction. Stifel's Opinion did not constitute a recommendation to the Jaguar Board as to how the Jaguar Board should vote or otherwise act with respect to the Transaction or any other matter, or to any stockholder of Jaguar or Napo as to how any such stockholder should vote or act with respect to the Transaction or any other matter, or whether or not any stockholder of Jaguar or Napo should enter into a voting, stockholders', affiliates' or similar agreement with respect to the Transaction or exercise any dissenters', appraisal or similar rights that may be available to such stockholder. In addition, Stifel's Opinion did not compare the relative merits of the Transaction with any other alternative transactions or business strategies which may have been available to Jaguar, did not address the underlying business decision of the Jaguar Board or Jaguar to proceed with or effect the Transaction and did not address the form or structure of the merger or any other part of the Transaction or any individual transaction or group of transactions that is or are part of the Transaction.**

For a more complete description of Stifel's opinion, see "The Proposed Merger Opinion of Jaguar Financial Advisor" beginning on page 275. See also *Annex C* to this joint proxy statement/prospectus.

Interests of Certain Jaguar and Napo Directors and Executive Officers in the Merger

You should be aware that some of Jaguar and Napo's directors and executive officers may have interests in the transaction that may be different from, or in addition to, the interests of stockholders of Jaguar and Napo, respectively.

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For a further discussion of interests of certain Napo directors and executive officers in the merger, see "Additional Interests of Certain of Jaguar and Napo's Directors and Executive Officers in the Merger" beginning on page 296.

Material United States Federal Income Tax Consequences of the Merger

The merger will not be taxable to stockholders of Jaguar, as they will continue to own their existing shares and the rights and privileges of their existing shares will not be affected by the merger.

The merger will not qualify as a tax-free reorganization within the meaning of Section 368 of the Internal Revenue Code of 1986, as amended (sometimes referred to as the Code). Although it is not free from doubt, a Napo Stockholder should not recognize any taxable gain or loss until such Napo Stockholder's Certificate Delivery Date. The term "Certificate Delivery Date" means, with respect to each Napo Stockholder, the date on which such Napo Stockholder delivers to the Exchange Agent his, her or its Napo stock certificate(s) for cancellation, together with a letter of transmittal duly executed and completed in accordance with its terms and such other documents and/or payments of withholding taxes as may be reasonably required by the Exchange Agent or Jaguar. At that time, such Napo Stockholder will recognize gain or loss from the sale of his, her or its shares of Napo common stock in an amount equal to the difference between (i) the fair market value of a Merger Share on such Napo Stockholder's Certificate Delivery Date multiplied by the number of Merger Shares received by such Napo Stockholder (sometimes referred to as the Purchase Price) and (ii) such Napo Stockholder's tax basis in his, her or its shares of Napo common stock surrendered in the merger. Any such capital gain or capital loss will constitute long-term capital gain or loss if the Napo Stockholder's holding period for his, her or its shares of Napo common stock is more than one year as of the effective date of the merger. In addition, a portion of the Purchase Price received by each Napo Stockholder will constitute imputed interest that will be taxed at ordinary rates pursuant to Section 483 of the Code. The imputed interest rules of Section 483 apply regardless of whether a Napo Stockholder recognizes taxable gain or loss on the merger. However, if a Napo Stockholder recognizes capital gain on the merger, the amount of such capital gain is reduced dollar-for-dollar by the amount of the Napo Stockholder's imputed interest, and if a Napo Stockholder recognizes a capital loss on the merger, the amount of such capital loss will be increased dollar-for-dollar by the amount of the Napo Stockholder's imputed interest.

Tax matters are very complicated and the tax consequences of the merger to you, if you are a Napo stockholder, will depend upon the facts of your situation. In addition, you may be subject to state, local or foreign tax laws that are not addressed in this joint proxy statement/prospectus. You are urged to consult with your own tax advisors for a full understanding of the tax consequences of the merger to you.

For a more complete description of the material United States federal income tax consequences of the merger, see "The Proposed Merger Material United States Federal Income Tax Consequences of the Merger" beginning on page 291.

Accounting Treatment of the Merger

It is anticipated that the merger will be accounted for as an acquisition by Jaguar of Napo under the acquisition method of accounting according to United States generally accepted accounting principles.

Regulatory Matters

Neither Jaguar nor Napo is required to make any filings or to obtain approvals or clearances from any antitrust regulatory authorities in the United States or other countries to complete the merger. In the United States, Jaguar must comply with applicable federal and state securities laws and the rules and regulations of The NASDAQ Stock Market LLC in connection with the issuance of shares of

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Jaguar's common stock in the merger, including the filing with the SEC of this proxy statement/prospectus/information statement. The merger agreement provides that Napo and Jaguar shall obtain all necessary actions or nonactions, waivers, consents and approvals from governmental entities or other persons necessary in connection with the consummation of the merger and the other transactions contemplated by the merger agreement and take all reasonable steps as may be necessary to obtain an approval or waiver from, or to avoid any action or proceeding by, any governmental entity or other persons necessary in connection with the consummation of the merger and the other transactions contemplated by the merger agreement. For a more complete discussion of the regulatory matters relating to the merger, see "The Proposed Merger Regulatory Matters Relating to the Merger" beginning on page 293.

Conditions to Completion of the Merger

Each party's obligation to effect the merger is subject to the satisfaction or waiver of various conditions, which include the following:

- the adoption of the merger agreement by Napo stockholders;
- the approval of (i) the issuance of shares of Jaguar common stock and non-voting common stock (Proposal 1), (ii) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc." (Proposal 6), (iii) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock (Proposal 7), and (iv) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock (Proposal 8);
- the absence of any law, order, decree, judgment, injunction or other legal restraint or prohibition entered, enacted, promulgated, enforced or issued by any governmental authority of competent jurisdiction making the merger illegal or otherwise preventing the consummation of the merger;
- the effectiveness of the registration statement of which this joint proxy statement/prospectus is a part and the absence of any stop order or proceedings initiated for that purpose;
- the approval of the listing of the Jaguar common stock to be issued in the merger on The NASDAQ Capital Market; and
- the filing of the Third Amended and Restated Certificate of Incorporation with the Delaware Secretary of State.

Each of Jaguar and Merger Sub's obligations to complete the merger are also separately subject to the satisfaction or waiver of the following conditions:

- the truth and correctness of Napo's representations and warranties, subject to certain materiality standards provided in the merger agreement;
- the performance by Napo of its obligations under the merger agreement in all material respects;
- the delivery by Napo of an officer's certificate certifying that the conditions set forth in the two bullets above have been satisfied;
- there shall have been no material adverse effect on Napo;

the execution of the escrow agreement relating to the Tranche B Shares by Napo and the escrow agent;

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the execution and delivery to Jaguar of signed copies of the settlement agreements between Napo and certain of Napo's existing creditors;

the delivery to Jaguar of a copy of the agreement in the form attached as Exhibit B to the merger agreement (sometimes referred to herein as a RSU Agreement) of each of the individuals set forth in Schedule 5 of the merger agreement (sometimes referred to herein as a RSU Indemnitor), in each case signed by the applicable RSU Indemnitor;

except (i) as otherwise provided in the merger agreement and (ii) for up to $6.2 million of trade payables and certain other debt, excluding transaction expenses, Napo shall have no liens or indebtedness outstanding or any commitment or agreement to issue liens or indebtedness, other than as set forth in Napo's disclosure letter;

Napo shall have no less than $500,000 in available cash;

Napo's trade payables and certain other debt, excluding transaction expenses, shall not exceed $6.2 million in the aggregate; and

the receipt of any waivers reasonably requested by Kingdon Associates, M. Kingdon Offshore Master Fund L.P., Kingdon Family Partnership, L.P. and Kingdon Credit Master Fund L.P. (collectively sometimes referred to herein as the Kingdon Purchasers) under the Amended and Restated Note Purchase Agreement, dated March 31, 2017, by and among Napo and the Kingdon Purchasers, in respect to the transactions contemplated by the merger agreement.

On June 27, 2017, Jaguar, Napo and Nantucket entered into the Amendment, Waiver & Consent, dated June 27, 2017 (sometimes referred to herein as the Consent), pursuant to which, among other things, Jaguar has agreed to, at the closing, waive the conditions to Jaguar's obligations to consummate the contemplated merger (x) set forth in Section 8.2(h) of the merger agreement regarding Napo's trade payables and other unsecured indebtedness (other than convertible debt) and/or other liabilities to existing creditors, exclusive of merger transaction expenses, which shall not exceed in the aggregate $6.2 million and (y) set forth in Section 8.2(i) of the merger agreement regarding a minimum available cash balance of Napo of $500,000.

Napo's obligation to complete the merger is also separately subject to the satisfaction or waiver of the following conditions:

the truth and correctness of the Jaguar and Merger Sub's representations and warranties, subject to certain materiality standards provided in the merger agreement;

the performance by Jaguar and Merger Sub of their respective obligations under the merger agreement in all material respects;

the delivery by Jaguar and Merger Sub of an officer's certificate certifying that the conditions set forth in the two bullets above have been satisfied;

the execution of the Investor Rights Agreement by Jaguar and Nantucket;

the execution by both Jaguar and Salix Pharmaceuticals, Inc. (sometimes referred to herein as Salix) of the letter agreement in the form attached as Schedule 4.8(c) of the Settlement, Termination, Asset Transfer and Transition Agreement, dated March 4, 2016, between Napo and Salix; and

there shall have been no material adverse effect on Jaguar and/or Merger Sub.

Jaguar and Napo currently expect to complete the merger by the end of July 2017. However, it is possible that factors outside of either company's control could cause the merger to be completed at a later time or not at all. The merger agreement provides that the conditions to the closing of the merger may be waived, in whole or in part, by Jaguar or Napo, to the extent legally allowed. Neither Jaguar

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nor Napo currently expects to waive any immaterial or material condition to the completion of the merger. If either Jaguar or Napo determines to waive any material condition to the merger and such waiver renders the disclosure in this joint proxy statement/prospectus materially misleading, proxies will be resolicited from the Jaguar and/or Napo stockholders, as applicable.

For a more complete discussion of the conditions to the merger, see "The Merger Agreement and Related Agreements Conditions to Completion of the Merger" beginning on page 311.

No Solicitation of Other Offers

The merger agreement contains certain restrictions on the ability of Napo to solicit or engage in discussions or negotiations with a third party with respect to a proposal to acquire Napo's equity or assets.

For a discussion of the prohibition on solicitation of acquisition proposals from third parties, see "The Merger Agreement and Related Agreements Non-Solicitation" beginning on page 311.

Termination

Jaguar and Napo may mutually agree at any time prior to the completion of the merger (including after stockholder approval) to terminate the merger agreement and abandon the merger. In addition, the merger agreement may be terminated by either Jaguar or Napo under certain circumstances or upon the occurrence of certain events.

For a discussion of termination provisions of the merger agreement, see "The Merger Agreement and Related Agreements Termination" beginning on page 313.

Termination Fees and Expenses

If the merger fails to close for any reason on, or prior to, July 31, 2017, other than as a result directly or indirectly of (x) lack of stockholder approval by either party or (y) Napo (i) fails to perform in accordance with the terms and conditions of the Binding Agreement of Terms for Jaguar Animal Health, Inc. Acquisition of Napo Pharmaceuticals, Inc., dated February 8, 2017, between Jaguar and Napo (sometimes referred to herein as the Binding Agreement of Terms) or the merger documents or (ii) fails to abide by or breaches the provisions or representations, warranties and covenants of the Binding Agreement of Terms or the merger documents, then on, or before, the close of business on August 7, 2017, Jaguar will issue 2,000,000 shares of its restricted common stock to Napo (sometimes referred to herein as the Break-Up Fee). See "The Merger Agreement and Related Agreements Termination Fee and Expenses" and " Effect of Termination," both beginning on page 314.

Shares Beneficially Owned by Directors and Executive Officers of Jaguar and Napo

Jaguar's directors and executive officers beneficially owned [•] shares of Jaguar common stock on June 30, 2017, the record date for the special meeting. These shares represent in total [•]% of the total voting power of Jaguar's voting securities outstanding and entitled to vote as of the record date. To approve the issuance of shares of Jaguar common stock and non-voting common stock in the transactions contemplated by the merger agreement (Proposal 1), the affirmative vote of, if a quorum is present at the special meeting, the holders of a majority of shares of Jaguar common stock, present in person or represented by proxy at the special meeting, voting as a single class and entitled to vote, is required. Jaguar currently expects that Jaguar's directors and executive officers will vote their shares **"FOR"** all the proposals to be voted on at the special meeting, although none of them has entered into any agreements obligating them to do so.

Napo's directors and executive officers beneficially owned [•] shares of Napo common stock on June 30, 2017, the record date for the special meeting. These shares represent in total [•]% of

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the total voting power of Napo's voting securities outstanding and entitled to vote as of the record date. Napo currently expects that its directors and executive officers will vote their shares **"FOR"** all the proposals to be voted on at the special meeting, although none of them has entered into any agreements obligating them to do so.

Appraisal Rights

Under Delaware law, Jaguar stockholders are not entitled to appraisal rights in connection with the issuance of shares of Jaguar common stock and non-voting common stock as contemplated by the merger agreement. Napo stockholders of record have appraisal rights under the Delaware General Corporation Law (sometimes referred to as the DGCL) in connection with the merger. For further discussion of appraisal rights, see "The Proposed Merger Appraisal Rights" beginning on page 293.

Comparison of the Rights of Jaguar and Napo Stockholders

The rights of Napo stockholders as Jaguar stockholders after the merger will be governed by Jaguar's Third Amended and Restated Certificate of Incorporation and amended and restated bylaws and the laws of the State of Delaware. Those rights differ from the rights of Napo stockholders under Napo's Fourth Amended and Restated Certificate of Incorporation, as amended, and amended and restated bylaws. See "Comparison of Rights of Jaguar and Napo Stockholders" beginning on page 331.

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RISK FACTORS

In addition to the other information included in this joint proxy statement/prospectus, including the matters addressed in the section entitled "Cautionary Statement Regarding Forward-Looking Statements" beginning on page 94, you should carefully consider the following risks before deciding how to vote, which include risks associated with the businesses of Jaguar and Napo. In addition, you should read and consider the risk factors associated with the businesses of Jaguar and Napo because those risks will also affect the combined company. Risks associated with the business of Jaguar and Napo can be found below. You should also read and consider the other information in this joint proxy statement/prospectus.

Risks Related to the Merger

The contingent rights that Napo stockholders are receiving in the merger may be exchanged for fewer shares of Jaguar stock than anticipated or none at all, depending on whether the resale of the Tranche A Shares to third parties provides Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount.

Of the 69,299,346 shares of Jaguar common stock and non-voting common stock to be issued by Jaguar in the transactions contemplated by the merger agreement and related Napo debt settlement, (x) up to approximately 19,700,625 shares of Jaguar common stock and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A Shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units (sometimes referred to herein collectively as the Merger Shares), are issuable upon the vesting of the contingent rights that the Napo stockholders are receiving in the merger (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger). A portion of the Merger Shares will initially be held in escrow (sometimes referred to herein as the Tranche B Shares) and will only be released to the Napo stockholders if the resale of the Tranche A Shares provides Nantucket with sufficient cash proceeds to satisfy the applicable Hurdle Amount. If Nantucket does not receive an amount equal to the Hurdle Amount from the sale of the Tranche A Shares before the third anniversary of the date on which the merger is consummated, then all of the Tranche B Shares then held in escrow will be released to Nantucket. As a result, Napo stockholders may receive fewer Merger Shares than anticipated or none at all, depending on whether the resale of the Tranche A Shares to third parties provides Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount. See "The Merger Agreement and Related Agreements Merger Consideration Calculation of Shares of Jaguar Common Stock Issuable to Holders of Contingent Rights."

Because the market price of Jaguar common stock will fluctuate, Napo stockholders cannot be sure of the market value of the Jaguar common stock that they will receive in the merger.

When Jaguar completes the merger, (i) each issued and outstanding share of Napo common stock (other than dissenting shares and shares held by Jaguar or Napo) will be converted into a contingent right to receive (x) up to a whole number of shares of Jaguar common stock comprising in the aggregate up to approximately 20.2% of the fully diluted shares of Jaguar common stock immediately following the consummation of the merger, which contingent right will vest only if the resale of the Tranche A Shares to third parties provides Nantucket with sufficient cash proceeds to satisfy the applicable Hurdle Amount and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A Shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units, (ii) existing creditors of Napo will receive an aggregate of not more than 42,957,072 shares of Jaguar non-voting common stock and not more than 2,282,445 shares of Jaguar voting common stock in full satisfaction of all existing indebtedness then owed by Napo to such creditors, and (iii) an existing Napo stockholder will be issued an aggregate of approximately 3,243,243

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shares of Jaguar common stock in return for $3 million of new funds invested into Jaguar by such investor. The market value of Jaguar common stock will continue to fluctuate until the completion of the merger. For example, during the fourth quarter of 2016 and the first quarter of 2017, the closing sales price of Jaguar common stock ranged from a low of $0.51 to a high of $1.30, as reported on The NASDAQ Capital Market. On June 29, 2017 the closing sales price of Jaguar common stock was $0.55. The merger agreement does not provide for any price-based termination right for either party. Accordingly, the market value of the shares of Jaguar common stock that Jaguar issues and Napo creditors and stockholders will be entitled to receive when the parties complete the merger will depend on the market value of shares of Jaguar common stock at the time that the parties complete the merger and could vary significantly from the market value on the date of this joint proxy statement/prospectus or the date of the Jaguar special meeting and the Napo special meeting. For a discussion of the minimum Hurdle Amount and the calculation of the number of Merger Shares issuable to the holders of contingent rights, see "The Merger Agreement and Related Agreements Merger Consideration Calculation of Shares of Jaguar Common Stock Issuable to Holders of Contingent Rights" and *Annex E* to this joint proxy statement/prospectus.

The issuance of shares of Jaguar common stock and non-voting common stock to Napo stockholders in the transactions contemplated by the merger agreement will substantially dilute the interest in Jaguar held by Jaguar stockholders prior to the merger.

If the merger is completed, it is estimated that Jaguar will issue up to an aggregate of approximately 69,299,346 shares of Jaguar common stock and non-voting common stock upon the closing of the merger on a fully diluted basis. Based on the number of shares of Jaguar common stock and Napo common stock issued and outstanding on the Jaguar and Napo record dates, the Napo Stakeholders will own, in the aggregate, approximately 75% of the aggregate number of shares of Jaguar common stock and non-voting common stock issued and outstanding immediately after the merger, on a fully diluted basis assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more. The issuance of shares of Jaguar common stock and non-voting common stock to the Napo Stakeholders will cause approximately a 75% reduction in the relative percentage interest of current Jaguar stockholders in the earnings, voting rights, liquidation value and book and market value of Jaguar. It is expected that Jaguar stockholders before the merger will hold approximately 25% of the total Jaguar common stock and non-voting common stock issued and outstanding immediately following completion of the merger on a fully diluted basis of Jaguar as of March 31, 2017, assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more. Thus, Jaguar stockholders before the merger will experience dilution in the amount of approximately 75% as a result of the merger.

Failure to complete the merger could adversely affect Jaguar's and Napo's stock prices and their future business and financial results.

Completion of the merger is subject to a number of conditions, including among other things, the receipt of approval of the Jaguar and Napo stockholders. There is no assurance that the parties will receive the necessary approvals or satisfy the other conditions to the completion of the merger. Failure to complete the proposed merger will prevent Jaguar and Napo from realizing the anticipated benefits of the merger. Each company will also remain liable for significant transaction costs, including legal, accounting and financial advisory fees, unless provided otherwise by the merger agreement. In addition, the market price of each company's common stock may reflect various market assumptions as to whether the merger will occur. Consequently, the failure to complete the merger could result in a significant change in the market price of the common stock of Jaguar and Napo.

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The market price of Jaguar common stock after the merger may be affected by factors different from those affecting the shares of Napo or Jaguar currently.

Upon completion of the merger and assuming the resale of the Tranche A shares to third parties provides Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount, holders of Napo common stock will become holders of Jaguar common stock. Jaguar's business differs in important respects from that of Napo, and, accordingly, the results of operations of the combined company and the market price of Jaguar common stock after the completion of the merger may be affected by factors different from those currently affecting the independent results of operations of each of Jaguar and Napo. For a discussion of the businesses of Jaguar and Napo and of certain factors to consider in connection with those businesses, see the risk factors included in this joint proxy statement/prospectus under the section entitled "Risk Factors Risks Related to Jaguar's Business" beginning on page 37,"Risk Factors Risks Related to Napo's Business" beginning on page 72, the description of Jaguar's business under the section entitled "Jaguar Business" beginning on page 95, and the description of Napo's business under the section entitled "Napo Business" beginning on page 127.

The unaudited pro forma combined condensed financial statements included in this document are preliminary and the actual financial condition and results of operations after the merger may differ materially.

The unaudited pro forma combined condensed financial statements in this joint proxy statement/prospectus are presented for illustrative purposes only and are not necessarily indicative of what Jaguar's actual financial condition or results of operations would have been had the merger been completed on the dates indicated. The unaudited pro forma combined condensed financial statements reflect adjustments to illustrate the effect of the merger had it been completed on the dates indicated, which are based upon preliminary estimates, to record the Napo identifiable assets acquired and liabilities assumed at fair value and the resulting goodwill recognized. The purchase price allocation for the merger reflected in this joint proxy statement/prospectus is preliminary, and final allocation of the purchase price will be based upon the actual purchase price and the fair value of the assets and liabilities of Napo as of the date of the completion of the merger. Accordingly, the final acquisition accounting adjustments may differ materially from the pro forma adjustments reflected in this document. For more information, see "Unaudited Pro Forma Combined Condensed Financial Statements" beginning on page 316.

Because certain directors and executive officers of Napo, as the case may be, are parties to agreements or are participants in other arrangements that give them interests that may be different from, or in addition to, your interests as a stockholder of Napo, these persons may have conflicts of interest in recommending that Napo stockholders vote to adopt the merger agreement and approve the merger.

The directors and executive officers of Napo, as the case may be, are parties to certain agreements or are participants in other arrangements that give them interests that may be different from, or in addition to, your interests as a stockholder of Napo. This difference of interests stems from the merger agreement providing that Napo will provide exculpation, indemnification and advancement expenses for each former director, officer, employee or agent of Napo to cover actions at or prior to the consummation of the merger, including all transactions contemplated by the merger agreement, which is at least as favorable in scope and amount as the exculpation, indemnification and advancement of expenses provided to such former director, officer, employee or agent of Napo prior to the consummation of the merger. The interests of the directors and executive officers of Napo in the merger that are different than those of the Napo stockholders are described under "Additional Interests of Certain of Jaguar and Napo's Directors and Executive Officers in the Merger" beginning on page 296.

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The merger agreement contains provisions that could discourage a potential alternative acquirer that might be willing to pay more to acquire Napo.

The merger agreement contains a "no shop" provision that restricts Napo's ability to solicit or facilitate proposals regarding a merger or similar transaction with another party. This provision could discourage a potential third party acquirer from considering or proposing an alternative acquisition, even if it were prepared to pay consideration with a higher value than that proposed to be paid in the merger.

Obtaining required approvals necessary to satisfy the conditions to the completion of the merger may delay or prevent completion of the merger.

To complete the merger, Jaguar stockholders must approve the issuance of shares of Jaguar common stock and non-voting common stock, amend the 2014 Plan, and adopt Jaguar's Third Amended and Restated Certificate of Incorporation, each as contemplated by the merger agreement, and Napo stockholders must adopt the merger agreement and approve the merger. In addition, the completion of the merger is conditioned upon the receipt of certain governmental authorizations, consents, orders or other approvals.

Jaguar and Napo intend to pursue all required approvals in accordance with the merger agreement. No assurance can be given that the required approvals will be obtained and, even if all such approvals are obtained, no assurance can be given as to the terms, conditions and timing of the approvals or that they will satisfy the terms of the merger agreement. See the sections entitled "The Merger Agreement and Related Agreements Conditions to the Completion of the Merger" and "The Proposed Merger Regulatory Matter Relating to the Merger" beginning on pages 311 and 293, respectively, for a discussion of the conditions to the completion of the merger.

The shares of Jaguar common stock and/or non-voting common stock to be received by Napo stockholders as a result of the merger, assuming the proceeds from the resale of the Tranche A Shares to third parties provides Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount, will have different rights from shares of Napo common stock.

Following completion of the merger, Napo stockholders will no longer be stockholders of Napo and will instead be stockholders of Jaguar only if the resale of the Tranche A Shares to third parties provides Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount. Although Napo and Jaguar are each incorporated under Delaware law, there will be important differences between the current rights of Napo stockholders and the rights of Jaguar stockholders, including the rights of holders of Jaguar common stock and non-voting common stock that may be important to Napo stockholders. See "Comparison of Rights of Jaguar and Napo Stockholders" beginning on page 331 for a discussion of the material differences between the rights associated with Napo common stock and Jaguar common stock and non-voting common stock.

The fairness opinion received by the Jaguar Board from Stifel does not reflect changes in circumstances subsequent to the date of the fairness opinion.

Stifel delivered to the Jaguar Board its opinion dated March 28, 2017. The opinion does not speak as of the time the merger will be completed or any date other than the date of such opinion. The opinion does not reflect changes that may occur or may have occurred after the date of the opinion, including changes to the operations and prospects of Napo or Jaguar, changes in general market and economic conditions or regulatory or other factors. Any such changes may materially alter or affect the relative values of Napo and Jaguar.

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If the NASDAQ Stock Market determines that the merger with Napo and the issuance of the merger consideration results in a change of control of the company, Jaguar may be required to submit a new application under NASDAQ's original listing standards and if such application is not approved, or the parties waive the listing of Jaguar's common stock on NASDAQ as a condition to closing, Jaguar's common stock may be delisted from The NASDAQ Capital Market and the market price of Jaguar's common stock could decline.

Based upon the current number of issued and outstanding shares of Napo common stock, in connection with the transactions contemplated in the merger agreement and Napo debt settlement, Jaguar will issue up to an aggregate of approximately 69,299,346 shares of common stock on a fully diluted basis. NASDAQ Rule 5110(a) provides that a company must apply for initial listing in connection with a transaction whereby a company combines with a non-NASDAQ entity, resulting in a change of control of such company and potentially allowing the non-NASDAQ entity to effectively obtain NASDAQ listing. In determining whether a change of control has occurred, NASDAQ considers all relevant factors including, changes in management, board of directors, voting power, ownership and financial structure of Jaguar. If The NASDAQ Stock Market determines that a change of control does in fact result from the consummation of the merger and the issuance of the merger consideration and either an original listing application has not been approved prior to the consummation of merger or the parties waive the listing of Jaguar's common stock on The NASDAQ Capital Market as a condition to closing, Jaguar will be in violation of NASDAQ Rule 5110(a) and Jaguar common stock could be delisted from The NASDAQ Capital Market. If NASDAQ determines to delist Jaguar common stock, an active trading market for Jaguar's common stock may not be sustained and the market price of Jaguar's common stock could decline, which will reduce the likelihood that Nantucket satisfies the applicable Hurdle Amount and that Napo stockholders' contingent rights will vest.

Termination of the merger agreement could negatively impact Napo or Jaguar.

If the merger agreement is terminated, there may be various consequences. For example, Napo's or Jaguar's businesses may have been impacted adversely by the failure to pursue other beneficial opportunities due to the focus of management on the merger, without realizing any of the anticipated benefits of completing the merger. Additionally, if the merger agreement is terminated, the market price of Napo's or Jaguar's common stock could decline to the extent that the current market prices of Jaguar common stock and Napo common stock reflect a market assumption that the merger will be completed.

The market price of Jaguar common stock after the merger may be affected by factors different from those currently affecting Jaguar shares.

Upon completion of the merger, holders of Napo common stock will become holders of Jaguar common stock only if the resale of the Tranche A Shares to third parties provides Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount. Jaguar's business differs in important respects from that of Napo, and, accordingly, the results of operations of the combined company and the market price of Jaguar common stock after the completion of the merger may be affected by factors different from those currently affecting Jaguar's operations.

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The pendency of the merger could have an adverse effect on Jaguar's and Napo's stock prices, business, financial condition, results of operations or business prospects.

While neither Jaguar nor Napo is aware of any significant adverse effects to date, the pendency of the merger could disrupt Jaguar's and/or Napo's businesses in the following ways, among others:

- customers and other third-party business partners of Jaguar or Napo may seek to terminate and/or renegotiate their relationships with Jaguar or Napo as a result of the merger, whether pursuant to the terms of their existing agreements with Jaguar or Napo or otherwise;

- the attention of Jaguar and/or Napo management may be directed toward the completion of the merger and related matters and may be diverted from the day-to-day business operations of their respective companies, including from other opportunities that might otherwise be beneficial to Jaguar or Napo; and

- current and prospective employees may experience uncertainty regarding their future roles with the combined company, which might adversely affect Jaguar's and/or Napo's ability to retain, recruit and motivate key personnel.

Should they occur, any of these matters could adversely affect the stock prices of, or harm the financial condition, results of operations or business prospects of, Jaguar and/or Napo.

Risks Related to Jaguar's Business

Jaguar has a limited operating history, expects to incur further losses as it grows and may be unable to achieve or sustain profitability. Jaguar's independent registered public accounting firm has expressed substantial doubt about its ability to continue as a going concern.

Since formation in June 2013, Jaguar's operations have been primarily limited to the research and development of its lead prescription drug product candidate, Canalevia, to treat various forms of diarrhea in dogs, and Jaguar's non-prescription product, Neonorm Calf, to help dairies and calf farms proactively retain fluid in calves helping the animals avoid debilitating, dangerous levels of dehydration, and the recent commercial launch of Neonorm Foal. As a result, Jaguar has limited meaningful historical operations upon which to evaluate its business and prospects and have not yet demonstrated an ability to broadly commercialize any of its products, obtain any required marketing approval for any of its prescription drug product candidates or successfully overcome the risks and uncertainties frequently encountered by companies in emerging fields such as the animal health industry. Jaguar also has not generated any material revenue to date, and expects to continue to incur significant research and development and other expenses. Jaguar's net loss and comprehensive loss for the year ended December 31, 2016 was $14.7 million. As of December 31, 2016, Jaguar had total stockholders' deficit of $2.5 million. Jaguar expects to continue to incur losses for the foreseeable future, which will increase significantly from historical levels as it expands its product development activities, seeks necessary approvals for its product candidates, conducts species-specific formulation studies for its non-prescription products and begins commercialization activities. Even if Jaguar succeeds in developing and broadly commercializing one or more of its products or product candidates, Jaguar expects to continue to incur losses for the foreseeable future, and Jaguar may never become profitable. If Jaguar fails to achieve or maintain profitability, then it may be unable to continue its operations at planned levels and be forced to reduce or cease operations.

As more fully discussed in Note 1 to Jaguar's Financial Statements, Jaguar believes there is substantial doubt about its ability to continue as a going concern as it does not currently have sufficient cash resources to fund its operations through February 15, 2018, or one year from the filing date of its Form 10-K. Jaguar's financial statements do not include any adjustments that may result from the outcome of this uncertainty. If Jaguar is unable to continue as a viable entity, Jaguar's stockholders may lose their entire investment.

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Jaguar has never generated any material revenue from operations and may not generate any material revenue from its operations in the foreseeable future.

Jaguar is an animal health company focused on developing and commercializing prescription drug and non-prescription products for companion and production animals, foals, and high value horses. Since inception in June 2013, Jaguar has not generated any material revenue from operations. There is no guarantee that Jaguar's recent commercial launch of Neonorm Calf for preweaned dairy calves in the United States will be successful or that Jaguar will be able to sell any products in the future. Further, in order to commercialize its prescription drug product candidates, Jaguar must receive regulatory approval from the FDA in the United States and other regulatory agencies in various jurisdictions. Jaguar has not yet received any regulatory approvals for its prescription drug product candidates. In addition, certain of its non-prescription products, such as Neonorm Calf, may be subject to regulatory approval outside the United States prior to commercialization. Accordingly, until and unless Jaguar receives any necessary regulatory approvals, Jaguar cannot market or sell its products. Moreover, even if Jaguar receives the necessary approvals, Jaguar may not be successful in generating revenue from sales of its products as it does not have any meaningful experience marketing or distributing its products. Accordingly, Jaguar may never generate any material revenue from its operations.

Jaguar expects to incur significant additional costs as it continues commercialization efforts for Neonorm, and undertakes the clinical trials necessary to obtain regulatory approvals for Canalevia and Equilevia, which will increase Jaguar's losses.

Jaguar commenced sales of Neonorm for preweaned dairy calves in the United States under the brand name Neonorm Calf at the end of 2014. Jaguar will need to continue to invest in developing its internal and third-party sales and distribution network and outreach efforts to key opinion leaders in the dairy industry, including veterinarians. Jaguar will also need to conduct clinical trials for Equilevia and Canalevia in order to obtain necessary initial regulatory approvals and to subsequently broaden Canalevia to additional indications and additional species. Jaguar will also need to conduct species-specific testing with Neonorm to expand to additional animal populations.

Jaguar is actively identifying additional products for development and commercialization, and will continue to expend substantial resources for the foreseeable future to develop Equilevia, Canalevia and Neonorm and develop products from the library of over 2,300 medicinal plants that Jaguar has licensed. These expenditures will include costs associated with:

- identifying additional potential prescription drug product candidates and non-prescription products;
- formulation studies;
- conducting pilot, pivotal and toxicology studies;
- completing other research and development activities;
- payments to technology licensors;
- maintaining Jaguar's intellectual property;
- obtaining necessary regulatory approvals;
- establishing commercial supply capabilities; and
- sales, marketing and distribution of Jaguar's commercialized products.

Jaguar also may incur unanticipated costs in connection with developing and commercializing its products. Because the outcome of Jaguar's development activities and commercialization efforts is

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inherently uncertain, the actual amounts necessary to successfully complete the development and commercialization of Jaguar's current or future products and product candidates may be greater than Jaguar anticipates.

Because Jaguar anticipates incurring significant costs for the foreseeable future, if Jaguar is not successful in broadly commercializing any of its current or future products or product candidates or raising additional funding to pursue its research and development efforts, Jaguar may never realize the benefit of its development efforts and its business may be harmed.

Jaguar will need to raise substantial additional capital in the future to fund its operations and Jaguar may be unable to raise such funds when needed and on acceptable terms, which would force Jaguar to delay, limit, reduce or terminate one or more of its product development programs or future commercialization efforts.

Jaguar is forecasting continued losses and negative cash flows as it continues to fund its operating and marketing activities and research and development programs, and Jaguar will not have sufficient cash on hand to fund its operating plan through August 2017 and to complete the development of all the current products in Jaguar's pipeline, or any additional products Jaguar may identify. Jaguar will need to seek additional funds sooner than planned through public or private equity or debt financings or other sources such as strategic collaborations. Other than the loan and security agreement (which provided for an initial loan commitment of $6.0 million) and the common stock purchase agreement, or the CSPA, with Aspire Capital Fund, LLC, or Aspire Capital (which committed Aspire Capital to purchase up to an aggregate of $15.0 million of Jaguar's shares of common stock over the term of the CSPA), Jaguar has no current agreements or arrangements with respect to any such financings or collaborations, and any such financings or collaborations may result in dilution to Jaguar's stockholders, the imposition of debt covenants and repayment obligations or other restrictions that may harm Jaguar's business or the value of Jaguar common stock. Jaguar may also seek from time to time to raise additional capital based upon favorable market conditions or strategic considerations such as potential acquisitions.

Jaguar's future capital requirements depend on many factors, including, but not limited to:

- the scope, progress, results and costs of researching and developing Jaguar's current and future prescription drug product candidates and non-prescription products;
- the timing of, and the costs involved in, obtaining any regulatory approvals for Jaguar's current and any future products;
- the number and characteristics of the products Jaguar pursues;
- the cost of manufacturing Jaguar's current and future products and any products Jaguar successfully commercializes;
- the cost of commercialization activities for Neonorm, Equilevia and Canalevia, if approved, including sales, marketing and distribution costs;
- the expenses needed to attract and retain skilled personnel;
- the costs associated with being a public company;
- Jaguar's ability to establish and maintain strategic collaborations, distribution or other arrangements and the financial terms of such agreements; and
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing possible patent claims, including litigation costs and the outcome of any such litigation.

Additional funds may not be available when Jaguar needs them on terms that are acceptable to Jaguar, or at all. If adequate funds are not available to us on a timely basis, Jaguar may be required to

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delay, limit, reduce or terminate one or more of its product development programs or future commercialization efforts.

Jaguar is substantially dependent on the success of Equilevia, Canalevia and Neonorm and cannot be certain that Equilevia or Canalevia will be approved or that Jaguar can successfully commercialize these products.

Jaguar currently does not have regulatory approval for any of its prescription drug product candidates, including Equilevia and Canalevia. Jaguar's current efforts are primarily focused on the commercial launch of Neonorm Calf and Neonorm Foal in the United States, and development efforts related to Equilevia and Canalevia. Jaguar is focused on expanding Canalevia's proposed indications to cover acute diarrhea in dogs and full FDA approval for CID for dogs. Accordingly, Jaguar's near-term prospects, including its ability to generate material product revenue, obtain any new financing if needed to fund its business and operations or enter into potential strategic transactions, will depend heavily on the success of Neonorm and, if approved, Equilevia and Canalevia.

Substantial time and capital resources have been previously devoted by third parties in the development of crofelemer, the active pharmaceutical ingredient, or API, in Canalevia, and the botanical extract used in Neonorm. Both crofelemer and the botanical extract used in Neonorm were originally developed at Shaman Pharmaceuticals, Inc., or Shaman, by certain members of Jaguar's management team, including Lisa A. Conte, Jaguar's Chief Executive Officer and President, and Steven R. King, Ph.D., Jaguar's Executive Vice President, Sustainable Supply, Ethnobotanical Research and Intellectual Property and Secretary. Shaman spent significant development resources before voluntarily filing for bankruptcy in 2001 pursuant to Chapter 11 of the U.S. Bankruptcy Code. The rights to crofelemer and the botanical extract used in Neonorm, as well as other intellectual property rights, were subsequently acquired by Napo from Shaman in 2001 pursuant to a court approved sale of assets. Ms. Conte founded Napo in 2001 and is the current interim chief executive officer of Napo and a member of its board of directors. While at Napo, certain members of Jaguar's management team, including Ms. Conte and Dr. King, continued the development of crofelemer. In 2005, Napo entered into license agreements with Glenmark Pharmaceuticals Ltd., or Glenmark, and Luye Pharma Group Limited for rights to various human indications of crofelemer in certain territories as defined in the respective license agreements with these licensees. Subsequently, after expending significant sums developing crofelemer, including trial design and on-going patient enrollment in the final pivotal Phase 3 trial for crofelemer for non-infectious diarrhea in adults with HIV/AIDS on antiretroviral therapy, in late 2008, Napo entered into a collaboration agreement with Salix Pharmaceuticals, Inc., or Salix, for development and commercialization rights to certain indications worldwide and certain rights in North America, Europe, and Japan, to crofelemer for human use. In January 2014, Jaguar entered into the Napo License Agreement pursuant to which Jaguar acquired an exclusive worldwide license to Napo's intellectual property rights and technology, including crofelemer and the botanical extract used in Neonorm, for all veterinary treatment uses and indications for all species of animals. In February 2014, most of the executive officers of Napo, and substantially all Napo's employees, became Jaguar's employees. If Jaguar is not successful in the development and commercialization of Neonorm and Canalevia, Jaguar's business and its prospects will be harmed.

The successful development and commercialization of Neonorm and, if approved, Equilevia and Canalevia will depend on a number of factors, including the following:

- the successful completion of the pivotal trials and toxicology studies for Equilevia and Canalevia, which may take significantly longer than Jaguar currently anticipates and will depend, in part, upon the satisfactory performance of third-party contractors;

- Jaguar's ability to demonstrate to the satisfaction of the FDA and any other regulatory bodies, the safety and efficacy of Equilevia and Canalevia;

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- Jaguar's ability and that of its contract manufacturers to manufacture supplies of Neonorm, Equilevia and Canalevia and to develop, validate and maintain viable commercial manufacturing processes that are compliant with current good manufacturing practices, or cGMP, if required;

- the success of Neonorm field studies and acceptance of their results by dairy producers;

- Jaguar's ability to successfully launch Neonorm, whether alone or in collaboration with others;

- Jaguar's ability to successfully launch Equilevia and Canalevia assuming approval is obtained, whether alone or in collaboration with others;

- the availability, perceived advantages, relative cost, relative safety and relative efficacy of Jaguar's prescription drug product candidates and non-prescription products compared to alternative and competing treatments;

- the acceptance of Jaguar's prescription drug product candidates and non-prescription products as safe and effective by veterinarians, animal owners and the animal health community;

- Jaguar's ability to achieve and maintain compliance with all regulatory requirements applicable to its business; and

- Jaguar's ability to obtain and enforce its intellectual property rights and obtain marketing exclusivity for its prescription drug product candidates and non-prescription products, and avoid or prevail in any third-party patent interference, patent infringement claims or administrative patent proceedings initiated by third parties or the U.S. Patent and Trademark Office, or USPTO.

Many of these factors are beyond Jaguar's control. Accordingly, Jaguar may not be successful in developing or commercializing Neonorm, Equilevia, Canalevia or any of its other potential products. If Jaguar is unsuccessful or are significantly delayed in developing and commercializing Neonorm, Equilevia, Canalevia or any of its other potential products, its business and prospects will be harmed and you may lose all or a portion of the value of your investment in Jaguar common stock.

If Jaguar is not successful in identifying, licensing, developing and commercializing additional product candidates and products, Jaguar's ability to expand its business and achieve its strategic objectives could be impaired.

Although a substantial amount of Jaguar's efforts are focused on the commercial launch of Neonorm and the continued development and potential approvals of Equilevia and Canalevia, a key element of Jaguar's strategy is to identify, develop and commercialize a portfolio of products to serve the animal health market. Most of Jaguar's potential products are based on Jaguar's knowledge of medicinal plants. Jaguar's current focus is primarily on product candidates and products for animals whose active pharmaceutical ingredient or botanical extract has been successfully commercialized or demonstrated to be safe and effective in human trials. In some instances, Jaguar may be unable to further develop these potential products because of perceived regulatory and commercial risks. Even if Jaguar successfully identifies potential products, Jaguar may still fail to yield products for development and commercialization for many reasons, including the following:

- competitors may develop alternatives that render Jaguar's potential products obsolete;

- potential products Jaguar seeks to develop may be covered by third-party patents or other exclusive rights;

- a potential product may on further study be shown to have harmful side effects in animals or other characteristics that indicate it is unlikely to be effective or otherwise does not meet applicable regulatory criteria;

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a potential product may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and

a potential product may not be accepted as safe and effective by veterinarians, animal owners, key opinion leaders and other decision-makers in the animal health market.

While Jaguar is developing species-specific formulations, including flavors, methods of administration, new patents and other strategies with respect to Jaguar's current potential products, Jaguar may be unable to prevent competitors from developing substantially similar products and bringing those products to market earlier than Jaguar can. If such competing products achieve regulatory approval and commercialization prior to Jaguar's potential products, Jaguar's competitive position may be impaired. If Jaguar fails to develop and successfully commercialize other potential products, its business and future prospects may be harmed and Jaguar will be more vulnerable to any problems that it encounters in developing and commercializing its current potential products.

The Elanco Agreement is important to Jaguar's business. If Jaguar or Elanco fail to adequately perform under the Elanco Agreement, or if Jaguar or Elanco terminate the Elanco Agreement, the development and commercialization of Canalevia and any other Licensed Products would be delayed or terminated and Jaguar's business would be adversely affected.

The Elanco Agreement is important to Jaguar's business, and its ability to develop and commercialize Canalevia and any other License Product is dependent upon this agreement.

The Elanco Agreement may be terminated by Elanco on a voluntary basis upon completion of the dose ranging study or at any time upon 90 days' written notice to Jaguar or for Jaguar's failure to complete certain a quality assessment with respect to a certain facility within 6 months of the effective date of the Elanco Agreement. The Elanco Agreement may also be terminated by either party:

for the other party's material breach, where such breach is not cured within the timeframe specified by the agreement;

upon the bankruptcy, insolvency or dissolution of the other party; or

for certain activities involving the challenge of certain patents licensed by us to Elanco.

Upon Elanco's voluntary termination or termination for Elanco's breach, among other things, all licenses and rights granted to Elanco will terminate and revert to Jaguar, and Elanco has agreed to assign to Jaguar all registrations and trademarks obtained in connection with the products covered by the agreement. Upon expiration of the term of the Elanco Agreement or termination for Jaguar's breach, among other things, Jaguar has agreed to assign to Elanco all registrations and trademarks obtained in connection with the products covered by the agreement.

Termination of the Elanco Agreement could cause significant delays in Jaguar's product development and commercialization efforts that could prevent Jaguar from commercializing its Licensed Products, including Canalevia, without first expanding its internal capabilities, securing additional financing or entering into another agreement with a third party. Any alternative collaboration or license could also be on less favorable terms to Jaguar.

Under the Elanco Agreement, among other things, Jaguar is responsible for the manufacture and supply of all of Elanco's reasonable requirements of the products covered by the agreement. If Jaguar is unable to meet its manufacture and supply obligations, Elanco may claim that Jaguar has materially breached the Elanco Agreement and terminate such agreement, which could adversely affect Jaguar's business and its ability to successfully develop and commercialize any products covered by the agreement, including Canalevia.

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Under the Elanco Agreement, Elanco has agreed to provide funding for certain clinical development activities. If the Elanco Agreement were terminated, Jaguar may need to seek additional financing to support the research and development of any terminated products or discontinue any terminated products, which could adversely affect Jaguar's business. In addition, Elanco is solely responsible for commercializing products outside the United States. Jaguar cannot directly control Elanco's commercialization activities or the resources it allocates to Jaguar's product candidates. Jaguar's interests and Elanco's interests may differ or conflict from time to time, or Jaguar may disagree with Elanco's level of effort or resource allocation. Elanco may internally prioritize Jaguar's product candidates differently than Jaguar does or it may not allocate sufficient resources to effectively or optimally commercialize them. If these events were to occur, Jaguar's business would be adversely affected.

Jaguar's animal health products faces significant competition from other pharmaceutical companies and Jaguar's operating results will suffer if Jaguar fails to compete effectively.

The development and commercialization of animal health products is highly competitive and Jaguar's success depends on its ability to compete effectively with other products in the market. Jaguar expects to compete with the animal health divisions of major pharmaceutical and biotechnology companies such as Merck Animal Health, Merial Inc., Elanco Animal Health, Bayer Animal Health GmbH, Novartis Animal Health Inc. and Boehringer Ingelheim Animal Health, as well as specialty animal health medicines companies such as Zoetis Inc., Phibro Animal Health Corporation and, in Europe, Virbac S.A., Vétoquinol S.A., Ceva Animal Health S.A. and Dechra Pharmaceuticals PLC. Jaguar is also aware of several early-stage companies that are developing products for use in the animal health market, including Aratana Therapeutics, Inc., Kindred Biosciences, Inc., Parnell Pharmaceuticals Holdings Ltd, Nexvet Biopharma and ImmuCell Corporation. Jaguar also competes with academic institutions, governmental agencies and private organizations that are conducting research in the field of animal health products.

Although there are currently no FDA-approved anti-secretory products to treat acute diarrhea in dogs, Jaguar anticipates that Canalevia, if approved, will face competition from various products, including products approved for use in humans that are used extra-label in animals. Extra-label use is the use of an approved drug outside of its cleared or approved indications in the animal context. All of Jaguar's potential products could also face competition from new products in development. These and other potential competing products may benefit from greater brand recognition and brand loyalty than Jaguar's products and product candidates may achieve.

Many of Jaguar's competitors and potential competitors have substantially more financial, technical and human resources than Jaguar does. Many also have more experience in the development, manufacture, regulation and worldwide commercialization of animal health products, including animal prescription drugs and non-prescription products.

For these reasons, Jaguar cannot be certain that it and its products can compete effectively.

Jaguar may be unable to obtain, or obtain on a timely basis, regulatory approval for its existing or future prescription drug product candidates under applicable regulatory requirements, which would harm its operating results.

The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of animal health products are subject to extensive regulation. Jaguar is usually not permitted to market its prescription drug product candidates in the United States until it receives approval of an NADA from the FDA. To gain approval to market an animal prescription drug for a particular species, Jaguar must provide the FDA with safety and efficacy data from pivotal trials that adequately demonstrate that Jaguar's prescription drug product candidates are safe and effective in the target species (*e.g.* dogs, cats

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or horses) for the intended indications. In addition, Jaguar must provide manufacturing data evidencing that it can produce its product candidates in accordance with cGMP. For the FDA, Jaguar must also provide data from toxicology studies, also called target animal safety studies, and in some cases environmental impact data. In addition to Jaguar's internal activities, Jaguar will partially rely on contract research organizations, or CROs, and other third parties to conduct its toxicology studies and for certain other development activities. The results of toxicology studies and other initial development activities, and of any previous studies in humans or animals conducted by Jaguar or third parties, may not be predictive of future results of pivotal trials or other future studies, and failure can occur at any time during the conduct of pivotal trials and other development activities by Jaguar or its CROs. Jaguar's pivotal trials may fail to show the desired safety or efficacy of its prescription drug product candidates despite promising initial data or the results in previous human or animal studies conducted by others, and success of a prescription drug product candidate in prior animal studies, or in the treatment of humans, does not ensure success in subsequent studies. Clinical trials in humans and pivotal trials in animals sometimes fail to show a benefit even for drugs that are effective because of statistical limitations in the design of the trials or other statistical anomalies. Therefore, even if Jaguar's studies and other development activities are completed as planned, the results may not be sufficient to obtain a required regulatory approval for a product candidate.

Regulatory authorities can delay, limit or deny approval of any of Jaguar's prescription drug product candidates for many reasons, including:

- if they disagree with Jaguar's interpretation of data from its pivotal studies or other development efforts;
- if Jaguar is unable to demonstrate to their satisfaction that Jaguar's product candidate is safe and effective for the target indication and in the target species;
- if they require additional studies or change their approval policies or regulations;
- if they do not approve of the formulation, labeling or the specifications of Jaguar's current and future product candidates; and
- if they fail to approve the manufacturing processes of Jaguar's third-party contract manufacturers.

Further, even if Jaguar receives a required approval, such approval may be for a more limited indication than Jaguar originally requested, and the regulatory authority may not approve the labeling that Jaguar believes is necessary or desirable for successful commercialization.

Any delay or failure in obtaining any necessary regulatory approval for the intended indications of Jaguar's product candidates would delay or prevent commercialization of such product candidates and would harm Jaguar's business and Jaguar's operating results.

The results of Jaguar's earlier studies of Neonorm may not be predictive of the results in any future species-specific formulation studies, and Jaguar may not be successful in its efforts to develop or commercialize line extensions of Neonorm.

Jaguar's product pipeline includes a number of species-specific formulations of Neonorm, Jaguar's lead non-prescription product. The results of Jaguar's dairy calf studies and other initial development activities and of any previous studies in humans or animals conducted by Jaguar or third parties may not be predictive of future results of these formulation studies. Failure can occur at any time during the conduct of these trials and other development activities. Even if Jaguar's species-specific formulation studies and other development activities are completed as planned, the results may not be sufficient to pursue a particular line extension for Neonorm. Further, even if Jaguar obtains promising results from its species-specific formulation studies, Jaguar may not successfully commercialize any line extension.

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Because line extensions are developed for a particular species market, Jaguar may not be able to leverage its experience from the commercial launch of Neonorm Calf and Neonorm Foal in new animal species markets. If Jaguar is not successful in developing and successfully commercializing these line extension products, Jaguar may not be able to grow its revenue and its business may be harmed.

Development of prescription drug products is inherently expensive, time-consuming and uncertain, and any delay or discontinuance of Jaguar's current or future pivotal trials would harm Jaguar's business and prospects.

Development of prescription drug products for animals remains an inherently lengthy, expensive and uncertain process, and Jaguar's development activities may not be successful. Jaguar does not know whether its current or planned pivotal trials for any of its product candidates will begin or conclude on time, and they may be delayed or discontinued for a variety of reasons, including if Jaguar is unable to:

- address any safety concerns that arise during the course of the studies;
- complete the studies due to deviations from the study protocols or the occurrence of adverse events;
- add new study sites;
- address any conflicts with new or existing laws or regulations; or
- reach agreement on acceptable terms with study sites, which can be subject to extensive negotiation and may vary significantly among different sites.

Further, Jaguar may not be successful in developing species-specific formulations for Neonorm, and Neonorm may be subject to the same regulatory regime as prescription drug products in jurisdictions outside the United States. Any delays in completing Jaguar's development efforts will increase its costs, delay its development efforts and approval process and jeopardize its ability to commence product sales and generate revenue. Any of these occurrences may harm Jaguar's business, financial condition and prospects. In addition, factors that may cause a delay in the commencement or completion of Jaguar's development efforts may also ultimately lead to the denial of regulatory approval of Jaguar's product candidates which, as described above, would harm Jaguar's business and prospects.

Jaguar will partially rely on third parties to conduct its development activities. If these third parties do not successfully carry out their contractual duties, Jaguar may be unable to obtain regulatory approvals or commercialize its current or future product candidates on a timely basis, or at all.

Jaguar will partially rely upon CROs to conduct its toxicology studies and for other development activities. Jaguar intends to rely on CROs to conduct one or more of its planned pivotal trials. These CROs are not Jaguar's employees, and except for contractual duties and obligations, Jaguar has limited ability to control the amount or timing of resources that they devote to Jaguar's programs or manage the risks associated with their activities on Jaguar's behalf. Jaguar is responsible for ensuring that each of its studies is conducted in accordance with the development plans and trial protocols presented to regulatory authorities. Any deviations by Jaguar's CROs may adversely affect its ability to obtain regulatory approvals, subject Jaguar to penalties or harm Jaguar's credibility with regulators. The FDA and foreign regulatory authorities also require Jaguar and its CROs to comply with regulations and standards, commonly referred to as good clinical practices, or GCPs, or good laboratory practices, or GLPs, for conducting, monitoring, recording and reporting the results of Jaguar's studies to ensure that the data and results are scientifically valid and accurate.

Agreements with CROs generally allow the CROs to terminate in certain circumstances with little or no advance notice. These agreements generally will require Jaguar's CROs to reasonably cooperate

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with Jaguar at Jaguar's expense for an orderly winding down of the CROs' services under the agreements. If the CROs conducting Jaguar's studies do not comply with their contractual duties or obligations, or if they experience work stoppages, do not meet expected deadlines, or if the quality or accuracy of the data they obtain is compromised, Jaguar may need to secure new arrangements with alternative CROs, which could be difficult and costly. In such event, Jaguar's studies also may need to be extended, delayed or terminated as a result, or may need to be repeated. If any of the foregoing were to occur, regulatory approval, if required, and commercialization of Jaguar's product candidates may be delayed and Jaguar may be required to expend substantial additional resources.

Even if Jaguar obtains regulatory approval for Equilevia, Canalevia or its other product candidates, they may never achieve market acceptance. Further, even if Jaguar is successful in commercially launching Neonorm, it may not achieve commercial success.

If Jaguar obtain necessary regulatory approvals for Equilevia, Canalevia or its other product candidates, such products may still not achieve market acceptance and may not be commercially successful. Market acceptance of Canalevia, Equilevia, Neonorm and any of Jaguar's other products depends on a number of factors, including:

- the safety of Jaguar's products as demonstrated in its target animal studies;
- the indications for which Jaguar products are approved or marketed;
- the potential and perceived advantages over alternative treatments or products, including generic medicines and competing products currently prescribed by veterinarians, and products approved for use in humans that are used extra-label in animals;
- the acceptance by veterinarians, companion animal owners and production animal owners, including in the dairy industry, of Jaguar's products as safe and effective;
- the cost in relation to alternative treatments and willingness on the part of veterinarians and animal owners to pay for Jaguar's products;
- the prevalence and severity of any adverse side effects of Jaguar's products;
- the relative convenience and ease of administration of Jaguar's products; and
- the effectiveness of Jaguar's sales, marketing and distribution efforts.

Any failure by Canalevia, Equilevia, Neonorm or any of Jaguar's other products to achieve market acceptance or commercial success would harm Jaguar's financial condition and results of operations.

The dairy industry is subject to conditions beyond Jaguar's control and the occurrence of any such conditions may harm Jaguar's business and impact the demand for its products.

The demand for production animal health products, such as Neonorm Calf, is heavily dependent on factors that affect the dairy market that are beyond Jaguar's control, including the following, any of which may harm Jaguar's business:

- cost containment measures within the dairy industry, in response to international, national and local general economic conditions, which may affect the market adoption of Jaguar's products;

state and federal government policies, including government-funded programs or subsidies whose discontinuance or modification could erode the demand for Jaguar's products;

a decline in demand for dairy products due to changes in consumer diets away from dairy products, which could adversely affect the demand for production animal health products;

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adverse weather conditions and natural disasters, such as floods, droughts, and pestilence, which can lower dairy yields; and

disease or other conditions beyond Jaguar's control.

Animal products, like human products, are subject to unanticipated post-approval safety or efficacy concerns, which may harm Jaguar's business and reputation.

The success of Jaguar's commercialization efforts will depend upon the perceived safety and effectiveness of animal health products, in general, and of Jaguar's products, in particular. Unanticipated safety or efficacy concerns can subsequently arise with respect to approved prescription drug products, or non-prescription products, such as Neonorm, which may result in product recalls or withdrawals or suspension of sales, as well as product liability and other claims. Any safety or efficacy concerns, or recalls, withdrawals or suspensions of sales of Jaguar's products, or human products derived from *Croton lechleri*, if any, could harm Jaguar's reputation and business, regardless of whether such concerns or actions are justified.

Future federal and state legislation may result in increased exposure to product liability claims, which could result in substantial losses.

Under current federal and state laws, companion and production animals are generally considered to be the personal property of their owners and, as such, the owners' recovery for product liability claims involving their companion and production animals may be limited to the replacement value of the animal. Companion animal owners and their advocates, however, have filed lawsuits from time to time seeking non-economic damages such as pain and suffering and emotional distress for harm to their companion animals based on theories applicable to personal injuries to humans. If new legislation is passed to allow recovery for such non-economic damages, or if precedents are set allowing for such recovery, Jaguar could be exposed to increased product liability claims that could result in substantial losses to Jaguar if successful. In addition, some horses can be worth millions of dollars or more, and product liability for horses may be very high. While Jaguar currently has product liability insurance, such insurance may not be sufficient to cover any future product liability claims against Jaguar.

If Jaguar fails to retain current members of its senior management, or to identify, attract, integrate and retain additional key personnel, its business will be harmed.

Jaguar's success depends on its continued ability to attract, retain and motivate highly qualified management and scientific personnel. Jaguar is highly dependent upon its senior management, particularly Lisa A. Conte, Jaguar's president and Chief Executive Officer. The loss of services of any of Jaguar's key personnel would cause a disruption in Jaguar's ability to develop its current or future product pipeline and commercialize its products and product candidates. Although Jaguar has offer letters with these key members of senior management, such agreements do not prohibit them from resigning at any time. For example, the resignation of Jaguar's former Chief Financial Officer, Charles O. Thompson, in September 2014, and the mutually agreed departure of Jaguar's former Chief Veterinary Officer, Serge Martinod, D.V.M., Ph.D. in February 2015, caused Jaguar to incur additional expenses and expend resources to ensure a smooth transition with their respective successors, which diverted management attention away from executing Jaguar's operational plan during this period. Jaguar currently does not maintain "key man" life insurance on any of its senior management team. The loss of Ms. Conte or other members of Jaguar's current senior management could adversely affect the timing or outcomes of Jaguar's current and planned studies, as well as the prospects for commercializing Jaguar's products.

In addition, competition for qualified personnel in the animal health field is intense, because there are a limited number of individuals who are trained or experienced in the field. Further, Jaguar's

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headquarters are located in San Francisco, California, and the dairy and agriculture industries are not prevalent in urban areas such as San Francisco. Jaguar will need to hire additional personnel as it expands its product development and commercialization activities. Even if Jaguar is successful in hiring qualified individuals, as Jaguar is a growing organization, Jaguar does not have a track record for integrating and retaining individuals. If Jaguar is not successful in identifying, attracting, integrating or retaining qualified personnel on acceptable terms, or at all, its business will be harmed.

Jaguar is dependent on two suppliers for the raw material used to produce the active pharmaceutical ingredient in Canalevia and the botanical extract in Neonorm. The termination of either of these contracts would result in a disruption to product development and Jaguar's business will be harmed.

The raw material used to manufacture Canalevia and Neonorm is crude plant latex, or CPL, derived from the *Croton lechleri* tree, which is found in countries in South America, principally Peru. The ability of Jaguar's contract suppliers to harvest CPL is governed by the terms of their respective agreements with local government authorities. Although CPL is available from multiple suppliers, Jaguar only has contracts with two suppliers to obtain CPL and arrange the shipment to Jaguar's contract manufacturer. Accordingly, if Jaguar's contract suppliers do not or are unable to comply with the terms of Jaguar's respective agreements, and Jaguar is not able to negotiate new agreements with alternate suppliers on terms that Jaguar deems commercially reasonable, it may harm Jaguar's business and prospects. The countries from which Jaguar obtains CPL could change their laws and regulations regarding the export of the natural products or impose or increase taxes or duties payable by exporters of such products. Restrictions could be imposed on the harvesting of the natural products or additional requirements could be implemented for the replanting and regeneration of the raw material. Such events could have a significant impact on Jaguar's cost and ability to produce Canalevia, Neonorm and anticipated line extensions.

Jaguar is dependent upon third-party contract manufacturers, both for the supply of the active pharmaceutical ingredient in Canalevia and the botanical extract in Neonorm, as well as for the supply of finished products for commercialization.

To date, the CPL, API, botanical extract and some finished products that Jaguar has used in its studies and trials were obtained from Napo. Jaguar has also contracted with third parties for the formulation of API and botanical extract into finished products for Jaguar's studies. Jaguar has entered into memorandums of understanding with Indena S.p.A. for the manufacture of CPL received from Jaguar's suppliers into the API in Canalevia to support Jaguar's regulatory filings, as well as the botanical extract in Neonorm and agreed to negotiate a commercial supply agreement. Indena S.p.A. has never manufactured either such ingredient to commercial scale. As a second supplier situation, Jaguar has entered into a four-year manufacturing and supply agreement with Glenmark for the supply of the API in Canalevia. Glenmark is the current manufacturer of crofelemer, the active API in Canalevia, for the FDA-approved human anti-secretory product, and the manufacturer on file for the NADA to which Jaguar has a right of reference. Jaguar has contracted with a third-party manufacturer for formulation development and manufacturing, whereby the manufacturer will provide enteric-coated tablets to us for use in animals. Jaguar also may contract with additional third parties for the formulation and supply of finished products, which Jaguar will use in its planned studies and commercialization efforts.

Jaguar will be dependent upon its contract manufacturers for the supply of the API in Canalevia. Jaguar currently has sufficient quantities of the botanical extract used in Neonorm to support initial commercialization of Neonorm. However, Jaguar will require additional quantities of the botanical extract if Jaguar's commercial launch of Neonorm is successful. If Jaguar is not successful in reaching agreements with third parties on terms that Jaguar considers commercially reasonable for manufacturing and formulation, or if Jaguar's contract manufacturer and formulator are not able to

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produce sufficient quantities or quality of API, botanical extract or finished product under their agreements, it could delay Jaguar's plans and harm its business prospects.

The facilities used by Jaguar's third-party contractors are subject to inspections, including by the FDA, and other regulators, as applicable. Jaguar also depends on its third-party contractors to comply with cGMP. If Jaguar's third-party contractors do not maintain compliance with these strict regulatory requirements, Jaguar and they will not be able to secure or maintain regulatory approval for their facilities, which would have an adverse effect on Jaguar's operations. In addition, in some cases, Jaguar also is dependent on its third-party contractors to produce supplies in conformity to its specifications and maintain quality control and quality assurance practices and not to employ disqualified personnel. If the FDA or a comparable foreign regulatory authority does not approve the facilities of Jaguar's third-party contractors if so required, or if it withdraws any such approval in the future, Jaguar may need to find alternative manufacturing or formulation facilities, which could result in delays in Jaguar's ability to develop or commercialize its products, if at all. Jaguar and its third-party contractors also may be subject to penalties and sanctions from the FDA and other regulatory authorities for any violations of applicable regulatory requirements. The USDA and the European Medicines Agency, or the EMA, employ different regulatory standards than the FDA, so Jaguar may require multiple manufacturing processes and facilities for the same product candidate or any approved product. Jaguar is also exposed to risk if its third-party contractors do not comply with the negotiated terms of Jaguar's agreements, or if they suffer damage or destruction to their facilities or equipment.

If Jaguar is unable to establish sales capabilities on its own or through third parties, Jaguar may not be able to market and sell its current or future products and product candidates, if approved, and generate product or other revenue.

Jaguar currently has limited sales, marketing or distribution capabilities, and prior to its launch of Neonorm for preweaned dairy calves, had no experience in the sale, marketing and distribution of animal health products. There are significant risks involved in building and managing a sales organization, including Jaguar's potential inability to attract, hire, retain and motivate qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel and effectively oversee a geographically-dispersed sales and marketing team. Any failure or delay in the development of Jaguar's internal sales, marketing and distribution capabilities and entry into adequate arrangements with distributors or other partners would adversely impact the commercialization of Neonorm, Equilevia and Canalevia, if approved. If Jaguar is not successful in commercializing Neonorm, Equilevia, Canalevia or any of its other line extension products, either on its own or through one or more distributors, or in generating upfront licensing or other fees, Jaguar may never generate significant revenue and may continue to incur significant losses, which would harm Jaguar's financial condition and results of operations.

Changes in distribution channels for animal prescription drugs may make it more difficult or expensive to distribute Jaguar's prescription drug products.

In the United States, animal owners typically purchase their animal prescription drugs from their local veterinarians who also prescribe such drugs. There is a trend, however, toward increased purchases of animal prescription drugs from Internet-based retailers, "big-box" retail stores and other over-the-counter distribution channels, which follows an emerging shift in recent years away from the traditional veterinarian distribution channel. It is also possible that animal owners may come to rely increasingly on Internet-based animal health information rather than on their veterinarians. Jaguar currently expects to market its animal prescription drugs directly to veterinarians, so any reduced reliance on veterinarians by animal owners could harm Jaguar's business and prospects by making it more difficult or expensive for Jaguar to distribute its prescription drug products. Animal owners also

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may substitute human health products for animal prescription drugs if the human health products are less expensive or more readily available, which could also harm Jaguar's business.

Legislation has been or may be proposed in various states that would require veterinarians to provide animal owners with written prescriptions and disclosures that the animal owner has the right to fill the prescriptions through other means. If enacted, such legislation could lead to a reduction in the number of animal owners who purchase their animal pharmaceuticals directly from veterinarians, which also could harm Jaguar's business.

Consolidation of Jaguar's customers could negatively affect the pricing of Jaguar's products.

Veterinarians will be Jaguar's primary customers for its prescription drug products, as well as, to some extent, its non-prescription products, such as Neonorm. In recent years, there has been a trend towards the consolidation of veterinary clinics and animal hospitals. If this trend continues, these large clinics and hospitals could attempt to leverage their buying power to obtain favorable pricing from Jaguar and other animal health product companies. Any downward pressure on the prices of any of Jaguar's products could harm Jaguar's operating results and financial condition.

Jaguar will need to increase the size of its organization and may not successfully manage such growth.

As of December 31, 2016, Jaguar had 23 employees. Jaguar's ability to manage its growth effectively will require Jaguar to hire, train, retain, manage and motivate additional employees and to implement and improve Jaguar's operational, financial and management systems. These demands also may require the hiring of additional senior management personnel or the development of additional expertise by Jaguar's senior management personnel. If Jaguar fails to expand and enhance its operational, financial and management systems in conjunction with its potential future growth, it could harm Jaguar's business and operating results.

Jaguar's research and development relies on evaluations in animals, which is controversial and may become subject to bans or additional regulations.

The evaluation of Jaguar's products and product candidates in target animals is required to develop, formulate and commercialize Jaguar's products and product candidates. Although Jaguar's animal testing will be subject to GLPs and GCPs, as applicable, animal testing in the human pharmaceutical industry and in other industries continues to be the subject of controversy and adverse publicity. Some organizations and individuals have sought to ban animal testing or encourage the adoption of additional regulations applicable to animal testing. To the extent that such bans or regulations are imposed, Jaguar's research and development activities, and by extension Jaguar's operating results and financial condition, could be harmed. In addition, negative publicity about animal practices by Jaguar or in its industry could harm Jaguar's reputation among potential customers.

If approved, Jaguar's prescription drug product candidates may be marketed in the United States only in the target animals and for the indications for which they are approved, and if Jaguar wants to expand the approved animals or indications, it will need to obtain additional approvals, which may not be granted.

If Jaguar's prescription drug product candidates are approved by regulatory authorities, Jaguar may market or advertise them only in the specific species and for treatment of the specific indications for which they were approved, which could limit use of the products by veterinarians and animal owners. Jaguar intends to develop, promote and commercialize approved products for other animals and new treatment indications in the future, but Jaguar cannot be certain whether or at what additional time and expense Jaguar will be able to do so. If Jaguar does not obtain marketing approvals for other species or for new indications, Jaguar's ability to expand its business may be harmed.

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Under the Animal Medicinal Drug Use Clarification Act of 1994, veterinarians are permitted to prescribe extra-label uses of certain approved animal drugs and approved human drugs for animals under certain conditions. While veterinarians may in the future prescribe and use human-approved products or Jaguar's products for extra-label uses, Jaguar may not promote its products for extra-label uses. If the FDA determines that any of Jaguar's marketing activities constitute promotion of an extra-label use, Jaguar could be subject to regulatory enforcement, including seizure of any misbranded or mislabeled drugs, and civil or criminal penalties, any of which could have an adverse impact on Jaguar's reputation and expose Jaguar to potential liability. Jaguar will continue to spend resources ensuring that its promotional claims for its products and product candidates remain compliant with applicable FDA laws and regulations, including materials Jaguar posts or links to on its website. For example, in 2012, Jaguar's Chief Executive Officer received an "untitled letter" from the FDA while at Napo regarding preapproval promotion statements constituting misbranding of crofelemer, which was then an investigational drug. These statements were included in archived press releases included on Napo's website. Napo was required to expend time and resources to revise its website to remove the links in order to address the concerns raised in the FDA's letter.

If Jaguar's prescription drug product candidates are approved by regulatory authorities, the misuse or extra-label use of such products may harm Jaguar's reputation or result in financial or other damages.

If Jaguar's prescription drug product candidates are approved by regulatory authorities, there may be increased risk of product liability if veterinarians, animal owners or others attempt to use such products extra-label, including the use of Jaguar's products in species (including humans) for which they have not been approved. Furthermore, the use of an approved drug for indications other than those indications for which such products have been approved may not be effective, which could harm Jaguar's reputation and lead to an increased risk of litigation. If Jaguar is deemed by a governmental or regulatory agency to have engaged in the promotion of any approved product for extra-label use, such agency could request that Jaguar modify its training or promotional materials and practices and Jaguar could be subject to significant fines and penalties, and the imposition of these sanctions could also affect Jaguar's reputation and position within the industry. Any of these events could harm Jaguar's reputation and its operating results.

Jaguar may not maintain the benefits associated with MUMS designation, including market exclusivity.

Although Jaguar has received MUMS designation for Canalevia for the treatment of CID in dogs, Jaguar may not maintain the benefits associated with MUMS designation. MUMS designation is a status similar to "orphan drug" status for human drugs. When Jaguar is granted MUMS designation, Jaguar is eligible for incentives to support the approval or conditional approval of the designated use. This designation does not allow Jaguar to commercialize a product until such time as Jaguar obtains approval or conditional approval of the product.

Because Canalevia has received MUMS designation for the identified particular intended use, Jaguar is eligible to obtain seven years of exclusive marketing rights upon approval (or conditional approval) of Canalevia for that intended use and become eligible for grants to defray the cost of Jaguar's clinical work. Each designation that is granted must be unique, *i.e.*, only one designation can be granted for a particular API in a particular dosage form for a particular intended use. The intended use includes both the target species and the disease or condition to be treated.

At some point, Jaguar could lose MUMS designation. The basis for a lost designation can include but is not limited to, Jaguar's failure to engage with due diligence in moving forward with a non-conditional approval, or a competing product has received conditional approval or approval prior to Jaguar's product candidate for the same indication or species. In addition, MUMS designation may be withdrawn for a variety of reasons such as where the FDA determines that the request for designation was materially defective, or if the manufacturer is unable to assure sufficient quantity of the

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prescription drug product to meet the needs of animals with the rare disease or condition. If this designation is lost, it could have a negative impact on the product and Jaguar, which includes but is not limited to, market exclusivity related to MUMS designation, or eligibility for grants as a result of MUMS designation.

The market for Jaguar's products, and the animal health market as a whole, is uncertain and may be smaller than Jaguar anticipates, which could lead to lower revenue and harm Jaguar's operating results.

It is very difficult to estimate the commercial potential of any of Jaguar's products because of the emerging nature of Jaguar's industry as a whole. The animal health market continues to evolve and it is difficult to predict the market potential for Jaguar's products. The market will depend on important factors such as safety and efficacy compared to other available treatments, changing standards of care, preferences of veterinarians, the willingness of companion and production animal owners to pay for such products, and the availability of competitive alternatives that may emerge either during the product development process or after commercial introduction. If the market potential for Jaguar's products is less than Jaguar anticipates due to one or more of these factors, it could negatively impact Jaguar's business, financial condition and results of operations. Further, the willingness of companion and production animal owners to pay for Jaguar's products may be less than Jaguar anticipates, and may be negatively affected by overall economic conditions. The current penetration of animal insurance in the United States is low, animal owners are likely to have to pay out-of-pocket, and such owners may not be willing or able to pay for Jaguar's products.

Jaguar's largest stockholder, Napo, controls a significant percentage of Jaguar common stock, and its interests may conflict with those of Jaguar's other stockholders.

As of June 26, 2017, Napo owned in the aggregate approximately 17.0% of Jaguar common stock. This concentration of ownership gives Napo significant influence over the way Jaguar is managed and the direction of Jaguar's business. In addition, because Jaguar and Napo are party to a license agreement, Napo's interests as the licensor of Jaguar's technology may be different from Jaguar's or those of Jaguar's other stockholders. As a result, the interests of Napo with respect to matters potentially or actually involving or affecting Jaguar, such as future acquisitions, licenses, financings and other corporate opportunities and attempts to acquire Jaguar, may conflict with the interests of Jaguar's other stockholders.

Further, Napo has entered into settlement agreements with certain of its existing creditors, which, among other things, require Jaguar, at the closing of the merger, to issue in the aggregate approximately 42,957,072 shares of Jaguar non-voting common stock and 2,282,445 shares of Jaguar common stock in full satisfaction of all existing indebtedness then owed by Napo to such creditors. Shares of Jaguar non-voting common stock are the same in all respects to shares of Jaguar's common stock except that holders of shares of non-voting common stock are not entitled to vote on matters submitted to Jaguar stockholders (other than in connection with a change of control of Jaguar), and shares of non-voting common stock are convertible into shares of common stock on a one-for-one basis (x) upon transfers to non-affiliates of Nantucket, (y) upon the release from escrow of certain non-voting shares held by Nantucket to the legacy stockholders of Napo under specified conditions and (z) at any time on or after April 1, 2018 at the option of the respective holders thereof. Napo has also issued to certain investors debt securities that are exchangeable or convertible for shares of Jaguar common stock. As a result, upon the consummation of the merger and related debt settlements, Napo's former creditors and certain investors of Napo debt securities (following conversion or exchange of such securities in accordance with their respective terms) will have significant influence over the way Jaguar is managed and the direction of Jaguar's business.

In addition, Jaguar's Chief Executive Officer is also the interim chief executive officer of Napo and her duties as interim chief executive officer of Napo may conflict with her duties as Jaguar's Chief

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Executive Officer, and the resolution of these conflicts may not always be in Jaguar or your best interest.

Napo's principal business currently consists of, among other activities, the management of its intellectual property portfolio, including rights under license agreements with respect to such intellectual property. Napo has limited assets, and its primary sources of revenues in recent years have been license fees, warrant exercises, equity and debt investments and, since late 2013, the receipt of royalties pursuant to its license agreements, which have been limited to date. If Napo fails to generate sufficient revenues to cover its operating costs or the contemplated merger is not consummated, Napo could revise its business strategy in ways that could affect its relationship with Jaguar. For example, it could decide to divest its assets, including its stock in Jaguar. Napo's interests in managing its business, including its ownership in Jaguar, may conflict with your interests.

If Jaguar fails to maintain effective internal control over financial reporting in the future, the accuracy and timing of its financial reporting may be adversely affected.

Jaguar's management is responsible for establishing and maintaining adequate internal control over its financial reporting, as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Preparing Jaguar's consolidated financial statements involves a number of complex manual and automated processes, which are dependent upon individual data input or review and require significant management judgment. One or more of these elements may result in errors that may not be detected and could result in a material misstatement of Jaguar's consolidated financial statements. If Jaguar fails to maintain the adequacy of its internal controls over financial reporting, Jaguar's business and operating results may be harmed and Jaguar may fail to meet its financial reporting obligations. If material weaknesses in Jaguar's internal control are discovered or occur, Jaguar's consolidated financial statements may contain material misstatements and Jaguar could be required to restate its financial results.

Jaguar's internal control over financial reporting may not prevent or detect misstatements because of its inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. Any failure of Jaguar's internal controls could adversely affect the results of the periodic management evaluations regarding the effectiveness of Jaguar's internal control over financial reporting. If Jaguar cannot provide reliable financial reports or prevent fraud, Jaguar's business and results of operations could be harmed, investors could lose confidence in Jaguar's reported financial information, and the trading price of Jaguar's stock may decline.

Jaguar may engage in future acquisitions that increase its capital requirements, dilute its stockholders, cause Jaguar to incur debt or assume contingent liabilities and subject Jaguar to other risks.

Jaguar may evaluate various strategic transactions, including licensing or acquiring complementary products, technologies or businesses. Any potential acquisitions may entail numerous risks, including increased operating expenses and cash requirements, assimilation of operations and products, retention of key employees, diversion of Jaguar management's attention and uncertainties in Jaguar's ability to maintain key business relationships of the acquired entities. In addition, if Jaguar undertakes acquisitions, Jaguar may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense. Moreover, Jaguar may not be able to locate suitable acquisition opportunities and this inability could impair Jaguar's ability to grow or obtain access to technology or products that may be important to the development of Jaguar's business.

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Certain of the countries in which Jaguar plans to commercialize its products in the future are developing countries, some of which have potentially unstable political and economic climates.

Jaguar may commercialize its products in jurisdictions that are developing and emerging countries. This may expose Jaguar to the impact of political or economic upheaval, and Jaguar could be subject to unforeseen administrative or fiscal burdens. At present, Jaguar is not insured against the political and economic risks of operating in these countries. Any significant changes to the political or economic climate in any of the developing countries in which Jaguar operates or plans to sell products either now or in the future may have a substantial adverse effect on Jaguar's business, financial condition, trading performance and prospects.

Fluctuations in the exchange rate of foreign currencies could result in currency transactions losses.

As Jaguar expands its operations, Jaguar expects to be exposed to risks associated with foreign currency exchange rates. Jaguar anticipates that it will commercialize Neonorm for preweaned dairy calves and its line extensions, as well as possibly Canalevia and its line extensions in jurisdictions outside the United States. As a result, Jaguar will also be further affected by fluctuations in exchange rates in the future to the extent that sales are denominated in currencies other than U.S. dollars. Jaguar does not currently employ any hedging or other strategies to minimize this risk, although Jaguar may seek to do so in the future.

Risks Related to Jaguar's Intellectual Property

Jaguar is dependent upon its license agreement with Napo and if the agreement is terminated for any reason Jaguar's business will be harmed.

In January 2014, Jaguar entered into a license agreement with Napo, or the Napo License Agreement, which Jaguar amended and restated in August 2014 and further amended in January 2015. Pursuant to the Napo License Agreement, Jaguar acquired an exclusive worldwide license to Napo's intellectual property rights and technology, including rights to its library of over 2,300 medicinal plants, for all veterinary treatment uses and indications for all species of animals except humans. Under the terms of the Napo License Agreement, Jaguar is responsible for, and shall ensure, the development and commercialization of products that contain or are derived from the licensed Napo technology worldwide in the field of veterinary treatment uses and indications for all species of animals. In consideration for the license, Jaguar is obligated to pay a one-time non-refundable license fee and royalties. Napo has the right to terminate the Napo License Agreement upon Jaguar's uncured material breach of the agreement or if Jaguar declares bankruptcy. If the Napo License Agreement is terminated for any reason, Jaguar's business will be harmed.

Napo has also entered into secured financing agreements with certain secured lenders, for whom Nantucket Investments Limited is acting as collateral agent. The security includes certain assets, including the intellectual property and technology licensed to Jaguar pursuant to the Napo License Agreement and Napo's shares of Jaguar common stock. Although Napo and Nantucket Investments Limited, on behalf of the secured lenders, have entered into a non-disturbance agreement with respect to the Napo License Agreement, in the event of a bankruptcy of Napo or foreclosure action with respect to Napo's assets, there can be no guarantee that the bankruptcy trustee or any other party to such action will not attempt to interfere with or terminate the Napo License Agreement or otherwise require its terms to be changed, which could harm Jaguar's business. Under the terms of the Napo License Agreement, certain events, such as an acquisition of Napo or a sale by Napo of all of the intellectual property and technology licensed to Jaguar pursuant to the Napo License Agreement, should result in a fully-paid up license to Jaguar of all of such intellectual property and technology. If for any reason, Napo ceases to be the owner of the intellectual property and technology licensed to Jaguar pursuant to the Napo License Agreement in such a manner that did not result in a fully-paid up

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license provided for therein, the owner of such intellectual property and technology could attempt to interfere with or terminate the Napo License Agreement or otherwise attempt to renegotiate the arrangement, which would harm Jaguar's business.

If Napo experiences financial difficulties, becomes unable to pay its liabilities when due, or declares bankruptcy, its creditors could attempt to assert claims against Napo relating to the formation of Jaguar and the grant of an exclusive license to Jaguar.

Napo formed Jaguar in June 2013, and in January 2014, Jaguar entered into the Napo License Agreement. Napo currently has limited commercial operations, one FDA approved product, and other sources of revenue in the near term are limited to the third parties who have licensed or may license Napo's intellectual property and technology, or collaborate with Napo in the future. Napo was involved in litigation with Salix and expended significant resources in the litigation and subsequent settlement. At the time of the formation of Jaguar and the date of the Napo License Agreement, Napo's liabilities exceeded its assets on a balance sheet prepared in conformity with U.S. generally accepted accounting principles. Napo has been able to pay its liabilities when due but if Napo experiences financial difficulties, becomes unable to pay its liabilities when due, or declares bankruptcy, a creditor, trustee in bankruptcy, or other representative of a Napo bankruptcy estate could attempt to assert claims against us relating to Jaguar's formation and Napo's grant of an exclusive license to Jaguar. One theory such a party could use to challenge Jaguar's formation and the license grant is that of fraudulent conveyance. This theory is used by creditors to challenge the transfer of assets made with actual intent to hinder, delay, or defraud creditors, or where a financially distressed entity transfers assets without receiving reasonably equivalent value in exchange, provided such litigation is brought within the applicable statute of limitations. Although Jaguar does not believe that its formation or Napo's grant of the license was a fraudulent conveyance, litigation based on such theory, if successful, could result in a court order setting aside the license for the benefit of the creditor pursuing the litigation or all creditors of Napo should it occur in the context of a Napo bankruptcy. Even if unsuccessful, any such action would divert management's attention, potentially be costly to defend and could harm Jaguar's business.

Jaguar currently does not own any issued patents, most of Jaguar's intellectual property is licensed from Napo and Jaguar cannot be certain that its patent strategy will be effective to enhance marketing exclusivity.

The patent prosecution process is expensive and time-consuming, and Jaguar may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that Jaguar will fail to identify patentable aspects of inventions made in the course of development and commercialization activities in time to obtain patent protection on them. Moreover, in some circumstances, Jaguar may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that Jaguar licenses from third parties. In particular, Jaguar is dependent upon Napo and its licensees to file, prosecute and maintain the intellectual property Jaguar licenses pursuant to the Napo License Agreement. The patents and patent applications Jaguar licensed from Napo, or the Napo Patents, which cover both human and veterinary uses, were previously licensed by Napo to Salix for certain fields of human use. On March 4, 2016, Napo and Salix settled litigation and all rights to crofelemer and Mytesi were returned to Napo and the collaboration agreement between Salix and Napo, or the Salix Collaboration Agreement, was terminated. Napo has the responsibility to file, prosecute and maintain the Napo Patents. As a result, under the Napo License Agreement, Jaguar only has the right to maintain any issued patents within the Napo Patents that are not maintained in accordance with the responsibilities of Napo. There are three issued Napo Patents in the United States that cover, collectively, enteric protected formulations of proanthocyanidin polymers isolated from *Croton spp.* and methods of treating watery diarrhea using the enteric protected formulations for both human and veterinary uses.

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Napo has also licensed its *Croton lechleri* related intellectual property to Glenmark and Luye Pharma Group Limited to develop and commercialize crofelemer for human indications in various geographies. Mytesi is dependent upon intellectual property protection from the Napo Patents. Napo currently markets Mytesi in the United States for human use and the three issued Napo Patents that cover enteric protected formulations of proanthocyanidin polymers isolated from *Croton spp*. and methods of treating watery diarrhea using the enteric protected formulations are listed in the FDA's Orange Book for Mytesi. Jaguar relies on these issued Napo Patents as intellectual property protection for Jaguar's prescription drug product candidates and non-prescription products. Pending patent applications within Napo Patents either may not be relevant to veterinary indications and/or may not issue as patents. If any patent application within the Napo Patents is not filed or prosecuted for any reason, including as a result of a lack of financial resources, and Jaguar is not able to file and prosecute such patent application within the Napo Patents, Jaguar's business may be harmed. In addition, as between Napo and Jaguar, Napo has the first right to enforce the Napo Patents against potential infringers. If Jaguar is not the party who enforces the Napo Patents, Jaguar will receive no proceeds from such enforcement action. In each case, such proceeds are subject to reimbursement of costs and expenses incurred by the other party in connection with such action. If Jaguar's current or future licensors fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated.

Jaguar currently does not own any issued patents. Jaguar has filed and has currently pending three applications under the Patent Cooperation Treaty, or PCT, one U.S. non-provisional patent application and eight provisional patent applications in the veterinary field, of which Jaguar controls the filing, prosecution and maintenance; however, patents based on any patent applications Jaguar may submit may never be issued. Jaguar has an exclusive worldwide license from Napo to various issued patents and pending patent applications in the field of animal health. The strength of patents in the field of animal health involves complex legal and scientific questions and can be uncertain. Even if patents do successfully issue, third parties may challenge their validity, enforceability or scope, which may result in such patents being narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, Jaguar's patents, if issued, and the patents Jaguar has licensed may not adequately protect Jaguar's intellectual property or prevent others from designing around their claims. If Jaguar cannot obtain issued patents or the patents Jaguar has licensed are not maintained or their scope is significantly narrowed, Jaguar's business and prospects would be harmed.

Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of any patent applications and the enforcement or defense of any patents that issue. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art, may affect patent litigation, and switch the U.S. patent system from a "first-to-invent" system to a "first-to-file" system. Under a "first-to-file" system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to the patent on an invention regardless of whether another inventor had made the invention earlier. The USPTO has developed new regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first-to-file provisions, became effective on March 16, 2013. Among some of the other changes to the patent laws are changes that limit where a patentee may file a patent infringement suit and that provide opportunities for third parties to challenge any issued patent in the USPTO. The Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of Jaguar's patent applications and the enforcement or defense of any patents that issue, all of which could harm Jaguar's business and financial condition.

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

Periodic maintenance and annuity fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If Jaguar or its licensors fail to maintain the patents and patent applications covering prescription drug product candidates and non-prescription products, Jaguar's competitors might be able to enter the market, which would harm Jaguar's business.

Third parties may initiate legal proceedings alleging that Jaguar is infringing their intellectual property rights, which would be costly, time-consuming and, if successfully asserted against Jaguar, delay or prevent the development and commercialization of Jaguar's current or future products and product candidates.

Jaguar's research, development and commercialization activities may infringe or otherwise violate or be claimed to infringe or otherwise violate patents owned or controlled by other parties. There may be patents already issued of which Jaguar is unaware that might be infringed by one of Jaguar's current or future prescription drug product candidates or non-prescription products. Moreover, it is also possible that patents may exist that Jaguar is aware of, but that Jaguar does not believe are relevant to its current or future prescription drug product candidates or non-prescription products, which could nevertheless be found to block Jaguar's freedom to market these products. Because patent applications can take many years to issue and may be confidential for 18 months or more after filing, there may be applications now pending of which Jaguar is unaware and which may later result in issued patents that may be infringed by Jaguar's current or future prescription drug product candidates or non-prescription products. Jaguar cannot be certain that its current or future prescription drug product candidates or non-prescription products will not infringe these or other existing or future third-party patents. In addition, third parties may obtain patents in the future and claim that use of Jaguar's technologies infringes upon these patents.

To the extent Jaguar becomes subject to future third-party claims against Jaguar or its collaborators, Jaguar could incur substantial expenses and, if any such claims are successful, Jaguar could be liable to pay substantial damages, including treble damages and attorney's fees if Jaguar or its collaborators are found to be willfully infringing a third party's patents. If a patent infringement suit were brought against Jaguar or its collaborators, Jaguar or they could be forced to stop or delay research, development, manufacturing or sales of the prescription drug or non-prescription product that is the subject of the suit. Even if Jaguar is successful in defending such claims, infringement and other intellectual property claims can be expensive and time-consuming to litigate and divert management's attention from Jaguar's business and operations. As a result of or in order to avoid potential patent infringement claims, Jaguar or its collaborators may be compelled to seek a license from a third party for which Jaguar would be required to pay license fees or royalties, or both. Moreover, these licenses may not be available on acceptable terms, or at all. Even if Jaguar or its collaborators were able to obtain such a license, the rights may be nonexclusive, which could allow Jaguar's competitors access to the same intellectual property. Any of these events could harm Jaguar's business and prospects.

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There has been substantial litigation regarding patents and other intellectual property rights in the field of therapeutics, as well as patent challenge proceedings, including interference, derivation and administrative law proceedings before the USPTO, and oppositions and other comparable proceedings in foreign jurisdictions. Under U.S. patent reform laws, new procedures, including *inter partes* review and post-grant review, were implemented as of September 16, 2012, with post-grant review available for patents issued on applications filed on or after March 16, 2013, and the implementation of such reform laws presents uncertainty regarding the outcome of any challenges to Jaguar's future patents, if any, and to patents Jaguar has in licensed. In addition to possible infringement claims against Jaguar, Jaguar may be subject to third-party pre-issuance submission of prior art to the USPTO, or become involved in opposition, derivation, reexamination, *inter partes* review, post-grant review, or other patent office proceedings or litigation in the United States or elsewhere, challenging Jaguar's patent rights or the patent rights of others. For applications filed before March 16, 2013 or patents issuing from such applications, if third parties have prepared and filed patent applications in the United States that also claim technology to which Jaguar has rights, Jaguar may have to participate in interference proceedings in the USPTO to determine the priority of invention. Because patent applications in the United States and most other countries are confidential for a period of time after filing, Jaguar cannot be certain that Jaguar was the first to either file patent applications on or invent any of the inventions claimed in Jaguar's patent applications. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal court necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Jaguar may also become involved in opposition or similar proceedings in patent offices in other jurisdictions regarding Jaguar's intellectual property rights with respect to Jaguar's prescription drug or non-prescription products and technology. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, Jaguar's future patent rights, if any, allow third parties to commercialize its technology or products and compete directly with Jaguar, without payment to Jaguar, or result in Jaguar's inability to manufacture or commercialize products without infringing third-party patent rights.

Jaguar's proprietary position depends upon patents that are formulation or method-of-use patents, which do not prevent a competitor from using the same drug candidate for another use.

Composition-of-matter patents on the API in prescription drug products are generally considered to be the strongest form of intellectual property protection because such patents provide protection without regard to any particular method of use or manufacture or formulation of the API used. The composition-of-matter patents for crofelemer, the API in Canalevia, have expired, and Jaguar has licensed from Napo patents and applications covering formulations and methods of use for crofelemer and the botanical extract in Neonorm.

Method-of-use patents protect the use of a product for the specified method and formulation patents cover formulations of the API or botanical extract. These types of patents do not prevent a competitor from developing or marketing an identical product for an indication that is outside the scope of the patented method or from developing a different formulation that is outside the scope of the patented formulation. Moreover, with respect to method-of-use patents, even if competitors do not actively promote their product for Jaguar's targeted indications or uses for which Jaguar may obtain patents, veterinarians may recommend that animal owners use these products extra-label, or animal owners may do so themselves. Although extra-label use may infringe or contribute to the infringement of method-of-use patents, the practice is common and such infringement is difficult to prevent or prosecute.

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If Jaguar efforts to protect intellectual property are not adequate, Jaguar may not be able to compete effectively in its markets.

Jaguar intends to rely upon a combination of regulatory exclusivity periods, patents, trade secret protection, confidentiality agreements, and license agreements to protect the intellectual property related to Jaguar's current prescription drug product candidates and non-prescription products and Jaguar's development programs.

If the breadth or strength of protection provided by any patents, patent applications or future patents Jaguar may own, license, or pursue with respect to any of its current or future product candidates or products is threatened, it could threaten Jaguar's ability to commercialize any of its current or future product candidates or products. Further, if Jaguar encounters delays in its development efforts, the period of time during which Jaguar could market any of its current or future product candidates or products under any patent protection Jaguar obtains would be reduced.

Given the amount of time required for the development, testing and regulatory review of new product candidates or products, patents protecting such candidates might expire before or shortly after such product candidates or products are commercialized. Patent term extensions have been applied for US 7,323,195 and US 7,341,744 to account for regulatory delays in obtaining human marketing approval for crofelemer, however, only one patent may be extended per marketed compound. If such extensions are received, then US 7,323,195 may be extended to June 2021 or US 7,341,744 may be extended to December 2020. However, the applicable authorities, including the USPTO and the FDA, and any equivalent regulatory authority in other countries, may not agree with Jaguar's assessment of whether such extensions are available, and may refuse to grant extensions to patents, or may grant more limited extensions than requested. If this occurs, Jaguar's competitors may take advantage of Jaguar's investment in development and trials by referencing Jaguar's clinical and preclinical data and launch their product earlier than might otherwise be the case.

Even where laws provide protection or Jaguar is able to obtain patents, costly and time-consuming litigation may be necessary to enforce and determine the scope of Jaguar's proprietary rights, and the outcome of such litigation would be uncertain. Moreover, any actions Jaguar may bring to enforce its intellectual property against its competitors could provoke them to bring counterclaims against Jaguar, and some of Jaguar's competitors have substantially greater intellectual property portfolios than Jaguar has.

If Jaguar is unable to prevent disclosure of its trade secrets or other confidential information to third parties, Jaguar's competitive position may be impaired.

Jaguar also relies on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable or for which Jaguar has not filed patent applications, processes for which patents are difficult to enforce and other elements of Jaguar's product development processes that involve proprietary know-how, information or technology that is not covered by patents. Although Jaguar requires all of its employees to assign their inventions to Jaguar, and endeavor to execute confidentiality agreements with all of Jaguar's employees, consultants, advisors and any third parties who have access to Jaguar's proprietary know-how, information or technology, Jaguar cannot be certain that it has executed such agreements with all parties who may have helped to develop Jaguar's intellectual property or had access to Jaguar's proprietary information, or that Jaguar's agreements will not be breached. Jaguar cannot guarantee that its trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to Jaguar's trade secrets or independently develop substantially equivalent information and techniques. If Jaguar is unable to prevent disclosure of its intellectual property to third parties, Jaguar may not be able to maintain a competitive advantage in its market, which would harm its business.

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Any disclosure to or misappropriation by third parties of Jaguar's confidential proprietary information could enable competitors to quickly duplicate or surpass Jaguar's technological achievements, and erode Jaguar's competitive position in its market.

Jaguar may be involved in lawsuits to protect or enforce any future patents issued to Jaguar, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe upon any patents that may issue to Jaguar, or any patents that Jaguar may license. To counter infringement or unauthorized use of any patents Jaguar may obtain, Jaguar may be required to file infringement claims or request that Jaguar's licensor file an infringement claim, which can be expensive and time-consuming to litigate. In addition, if Jaguar or one of its future collaborators were to initiate legal proceedings against a third party to enforce a patent covering Jaguar's current product candidates, or one of its future products, the defendant could counterclaim that the patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, non-enablement or lack of statutory subject matter. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant material information from the USPTO, or made a materially misleading statement, during prosecution. Third parties may also raise similar validity claims before the USPTO in post-grant proceedings such as *ex parte* reexaminations, *inter partes* review, or post-grant review, or oppositions or similar proceedings outside the United States, in parallel with litigation or even outside the context of litigation. The outcome following legal assertions of invalidity and unenforceability is unpredictable. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, Jaguar would lose at least part, and perhaps all, of any future patent protection on Jaguar's current or future product candidates. Such a loss of patent protection could harm Jaguar's business. Jaguar cannot be certain that there is no invalidating prior art, of which Jaguar and the patent examiner were unaware during prosecution. For the patents and patent applications that Jaguar has licensed, Jaguar may have limited or no right to participate in the defense of any licensed patents against challenge by a third party.

Litigation proceedings may fail and, even if successful, may result in substantial costs and distract Jaguar's management and other employees. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of Jaguar's confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be unsuccessful, it could have an adverse effect on the price of Jaguar common stock. Finally, Jaguar may not be able to prevent, alone or with the support of Jaguar's licensors, misappropriation of Jaguar's trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the United States.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing Jaguar's ability to protect its products.

As is the case with other animal health product companies, Jaguar's success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the animal health industry involves both technological and legal complexity. Therefore, obtaining and enforcing patents is costly, time-consuming and inherently uncertain. In addition, the United States has recently enacted and implemented wide-ranging patent reform legislation. The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to Jaguar's ability to obtain patents in the future, this combination of events

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has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken Jaguar's ability to obtain new patents or to enforce patents that Jaguar has licensed or that Jaguar might obtain in the future.

Jaguar may not be able to protect its intellectual property rights throughout the world, which could impair Jaguar's business.

Filing, prosecuting and defending patents on prescription drug products, product candidates and non-prescription products throughout the world would be prohibitively expensive. Competitors may use Jaguar's technologies in jurisdictions where Jaguar has not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where Jaguar may obtain patent protection, but where patent enforcement is not as strong as that in the United States. These products may compete with Jaguar's products in jurisdictions where Jaguar does not have any issued or licensed patents and any future patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to animal health products, which could make it difficult for Jaguar to stop the infringement of Jaguar's future patents, if any, or patents Jaguar has in licensed, or marketing of competing products in violation of Jaguar's proprietary rights generally. Further, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, Jaguar may encounter significant problems in protecting and defending its intellectual property both in the United States and abroad. Proceedings to enforce Jaguar's future patent rights, if any, in foreign jurisdictions could result in substantial cost and divert Jaguar's efforts and attention from other aspects of its business.

Jaguar's business could be harmed if it fails to obtain certain registered trademarks in the United States or in other countries.

In October 2014, Jaguar's trademark applications for Canalevia and Neonorm were approved for publication. Although Jaguar has filed a trademark application for its company name and its logo in the United States, Jaguar's applications have not been granted and the corresponding marks have not been registered in the United States. Jaguar has not filed for these or other trademarks in any other countries. During trademark registration proceedings, Jaguar may receive rejections of its trademark applications. If so, Jaguar will have an opportunity to respond, but Jaguar may be unable to overcome such rejections. In addition, the USPTO and comparable agencies in many foreign jurisdictions may permit third parties to oppose pending trademark applications and to seek to cancel registered trademarks. If opposition or cancellation proceedings are filed against any of Jaguar's trademark applications or any registered trademarks, Jaguar's trademarks may not survive such proceedings. Moreover, any name Jaguar proposes to use with its prescription drug product candidates in the United States, including Canalevia, must be approved by the FDA, regardless of whether Jaguar has registered or applied to register as a trademark. The FDA typically conducts a review of proposed prescription drug product names, including an evaluation of potential for confusion with other product names. If the FDA objects to any of Jaguar's proposed proprietary product names, Jaguar may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA.

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Jaguar may be subject to claims that its employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

Jaguar has received confidential and proprietary information from third parties. In addition, Jaguar employs individuals who were previously employed at other biotechnology, pharmaceutical or animal health companies. Jaguar may be subject to claims that it or its employees, consultants or independent contractors have inadvertently or otherwise improperly used or disclosed confidential information of these third parties or Jaguar's employees' former employers. Litigation may be necessary to defend against any such claims. Even if Jaguar is successful in defending against any such claims, such litigation could result in substantial cost and be a distraction to Jaguar's management and employees.

Risks Related to Government Regulation of Jaguar's Business

Even if Jaguar receives any required regulatory approvals for its current or future prescription drug product candidates and non-prescription products, Jaguar will be subject to ongoing obligations and continued regulatory review, which may result in significant additional expense.

If the FDA or any other regulatory body approves any of Jaguar's current or future prescription drug product candidates, or if necessary, its non-prescription products, the manufacturing processes, clinical development, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product may be subject to extensive and ongoing regulatory requirements. These requirements could include, but are not limited to, submissions of efficacy and safety and other post-marketing information and reports, establishment registration, and product listing, compliance with new rules promulgated under the FSMA, as well as continued compliance with cGMP, GLP and GCP for any studies that Jaguar conducts post-approval. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with Jaguar's contract manufacturers or manufacturing processes, or failure to comply with regulatory requirements, are reportable events to the FDA and may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market, revised labeling, or voluntary or involuntary product recalls;
- additional clinical studies fines, warning letters or holds on target animal studies;
- refusal by the FDA, or other regulators to approve pending applications or supplements to approved applications filed by Jaguar or Jaguar's strategic collaborators related to the unknown problems, or suspension or revocation of the problematic product's license approvals;
- product seizure or detention, or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The FDA or other regulatory agency's policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of Jaguar's product candidates or require certain changes to the labeling or additional clinical work concerning safety and efficacy of the product candidates. Jaguar cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If Jaguar is slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if Jaguar is not able to maintain regulatory compliance, Jaguar may lose any marketing approval that it may have obtained and it may not achieve or sustain profitability, which would harm its business. In addition, failure to comply with these regulatory requirements could result in significant penalties.

In addition, from time to time, Jaguar may enter into consulting and other financial arrangements with veterinarians, who prescribe or recommend Jaguar's products, once approved. As a result, Jaguar may be subject to state, federal and foreign healthcare and/or veterinary medicine laws, including but

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not limited to anti-kickback laws. If Jaguar's financial relationships with veterinarians are found to be in violation of such laws that apply to Jaguar, Jaguar may be subject to penalties.

The issuance by the FDA of protocol concurrences for Jaguar's pivotal studies does not guarantee ultimate approval of its NADA.

Jaguar intends to seek protocol concurrences from the FDA for the pivotal trial of Canalevia that Jaguar has initiated for acute diarrhea in dogs and for future pivotal trials in other indications. A pivotal study protocol is submitted to the FDA by a drug sponsor for purposes of obtaining FDA review of the protocol. Prior FDA review of the protocol for a pivotal study makes it more likely that the study will generate information the sponsor needs to demonstrate whether the drug is safe and effective for its intended use. It creates an expectation by the sponsor that the FDA should not later alter its perspectives on these issues unless public or animal health concerns appear that were not recognized at the time of protocol assessment. Even if the FDA issues a protocol concurrence, ultimate approval of an NADA by the FDA is not guaranteed because a final determination that the agreed-upon protocol satisfies a specific objective, such as the demonstration of efficacy, or supports an approval decision, will be based on a complete review of all the data submitted to the FDA. Even if Jaguar were to obtain protocol concurrence such concurrence does not guarantee that the results of the study will support a particular finding or approval of the new drug.

Any of Jaguar's current or future prescription drug product candidates or non-prescription products may cause or contribute to adverse medical events that Jaguar would be required to report to regulatory authorities and, if Jaguar fails to do so, Jaguar could be subject to sanctions that would harm its business.

If Jaguar is successful in commercializing any of its current or future prescription drug product candidates or non-prescription products, certain regulatory authorities will require that Jaguar report certain information about adverse medical events if those products may have caused or contributed to those adverse events. The timing of Jaguar's obligation to report would be triggered by the date Jaguar becomes aware of the adverse event as well as the nature of the event. Jaguar may fail to report adverse events it becomes aware of within the prescribed timeframe. Jaguar may also fail to appreciate that it has become aware of a reportable adverse event, especially if such event is not reported to Jaguar as an adverse event or if it is an adverse event that is unexpected or removed in time from the use of Jaguar's products. If Jaguar fails to comply with its reporting obligations, the regulatory authorities could take action including, but not limited to, criminal prosecution, seizure of Jaguar's products, facility inspections, removal of Jaguar's products from the market, recalls of certain lots or batches, or cause a delay in approval or clearance of future products.

Legislative or regulatory reforms with respect to animal health may make it more difficult and costly for Jaguar to obtain regulatory clearance or approval of any of Jaguar's current or future product candidates and to produce, market, and distribute Jaguar's products after clearance or approval is obtained.

From time to time, legislation is drafted and introduced in the U.S. Congress or other jurisdictions in which Jaguar intends to operate that could significantly change the statutory provisions governing the testing, regulatory clearance or approval, manufacture, and marketing of regulated products. In addition, the FDA's regulations and guidance are often revised or reinterpreted by the FDA and such other regulators in ways that may significantly affect Jaguar's business and its products and product candidates. Similar changes in laws or regulations can occur in other countries. Any new regulations or revisions or reinterpretations of existing regulations in the United States or in other countries may impose additional costs or lengthen review times of any of Jaguar's current or future products and product candidates. Jaguar cannot determine what effect changes in regulations, statutes, legal

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interpretation or policies, when and if promulgated, enacted or adopted may have on Jaguar's business in the future. Such changes could, among other things, require:

- changes to manufacturing methods;
- additional clinical trials or testing;
- new requirements related to approval to enter the market;
- recall, replacement, or discontinuance of certain products; and
- additional record keeping or the development of certain regulatory required hazard identification plans.

Each of these would likely entail substantial time and cost and could harm Jaguar's financial results. In addition, delays in receipt of or failure to receive regulatory clearances or approvals for any future products would harm Jaguar's business, financial condition, and results of operations.

Jaguar believes that its non-prescription products are not subject to regulation by regulatory agencies in the United States, but there is a risk that regulatory bodies may disagree with Jaguar's interpretation, or may redefine the scope of its regulatory reach in the future, which would result in additional expense and could delay or prevent the commercialization of these products.

The FDA retains jurisdiction over all animal prescription drug products however, in many instances, the Federal Trade Commission will exercise primary or concurrent jurisdiction with FDA on non-prescription products as to post marketing claims made regarding the product. On April 22, 1996, the FDA published a statement in the Federal Register, 61 FR 17706, that it believes that the Dietary Supplement and Health Education Act, or DSHEA, does not apply to animal health supplement products, such as Jaguar's non-prescription products. Accordingly, the FDA's Center for Veterinary Medicine only regulates those animal supplements that fall within the FDA's definition of an animal drug, animal food or animal feed additive. The Federal Food Drug and Cosmetic Act defines food as "articles used for food or drink for man or other animals and articles used as components of any such article." Animal foods are not subject to pre-market approval and are designed to provide a nutritive purpose to the animals that receive them. Feed additives are defined as those articles that are added to an animal's feed or water as illustrated by the guidance documents. Jaguar's non-prescription products are not added to food, are not ingredients in food nor are they added to any animal's drinking water. Therefore, Jaguar's non-prescription products do not fall within the definition of a food or feed additive. In light of the pronouncement by the FDA that the DSHEA was not intended to apply to animals, the FDA seeks to regulate such supplements as food or food additives depending on the intended use of the product. The intended use is demonstrated by how the article is included in a food, or added to the animals' intake (*i.e.,* through its drinking water). If the intended use of the product does not fall within the proscribed use making the product a food, it cannot be regulated as a food. There is no intent to make Jaguar's non-prescription products a component of an animal food, either directly or indirectly. A feed additive is a product that is added to a feed for any reason including the top dressing of an already prepared feed. Some additives, such as certain forage, are deemed to be Generally Recognized as Safe, or GRAS, and therefore, not subject to a feed Additive Petition approval prior to use. However, the substances deemed GRAS are generally those that are recognized as providing nutrients as a food does. Jaguar does not believe that its non-prescription products fit within this framework either. Finally, a new animal drug refers to drugs intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in animals. Jaguar's non-prescription Neonorm Foal and Neonorm Calf products are not intended to diagnose, cure, mitigate, treat or prevent disease and therefore, do not fit within the definition of an animal drug. Additionally, because a previously marketed human formulation of the botanical extract in Jaguar's non-prescription products was regulated as a human dietary supplement subject to the DSHEA (and not regulated as a drug by

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the FDA), Jaguar does not believe that the FDA would regulate the animal formulation used in its non-prescription products in a different manner. Jaguar does not believe that its non-prescription products fit the definition of an animal drug, food or food additive and therefore are not regulated by the FDA at this time.

However, despite many such unregulated animal supplements currently on the market, the FDA may choose in the future to exercise jurisdiction over animal supplement products in which case, Jaguar may be subject to unknown regulations thereby inhibiting its ability to launch or to continue marketing its non-prescription products. In the past, the FDA has redefined or attempted to redefine some non-prescription non-feed products as falling within the definition of drug, feed or feed additive and therefore subjected those products to the relevant regulations. Jaguar has not discussed with the FDA its belief that the FDA currently does not exercise jurisdiction over Jaguar's non-prescription products. Should the FDA assert regulatory authority over Jaguar's non-prescription products, Jaguar would take commercially reasonable steps to address the FDA's concerns, potentially including but not limited to, seeking registration for such products, reformulating such products to further distance such products from regulatory control, or ceasing sale of such products. Further, the Animal and Plant Health Inspection Service, an agency of the USDA, may at some point choose to exercise jurisdiction over certain non-prescription products that are not intended for production animals. Jaguar does not believe it is currently subject to such regulation, but could be in the future. If the FDA or other regulatory agencies, such as the USDA, try to regulate Jaguar's non-prescription products, Jaguar could be required to seek regulatory approval for its non-prescription products, which would result in additional expense and could delay or prevent the commercialization of these products.

Risks Related to Ownership of Jaguar's Common Stock

Jaguar's failure to meet the continued listing requirements of The NASDAQ Capital Market could result in a delisting of its common stock.

Jaguar's common stock is listed on The NASDAQ Capital Market, which imposes, among other requirements, a minimum stockholders equity requirement. On August 22, 2016 Jaguar received a notice from NASDAQ of non-compliance with its continuing listing rules, namely that Jaguar's stockholders' equity at June 30, 2016 of $1,565,316, as reported in Jaguar's Form 10-Q for the quarter then ended, was less than the $2,500,000 minimum. The failure to meet continuing compliance standards subjects Jaguar common stock to delisting. Based on the plan that Jaguar submitted to regain compliance, the Securities and Exchange Commission, or the SEC, granted Jaguar an extension until February 21, 2017 to regain compliance.

On February 22, 2017, Jaguar received a letter from NASDAQ stating that NASDAQ determined that Jaguar did not meet the terms of the extension and that Jaguar's securities are subject to delisting from NASDAQ unless Jaguar timely requests a hearing before the NASDAQ Hearings Panel (sometimes referred to herein as the "Panel"). Jaguar timely requested a hearing before the Panel, and at the hearing on April 20, 2017, Jaguar presented its plan to evidence compliance with the $2,500,000 stockholders' equity requirement (or the alternatives of market value of listed securities of $35 million or net income from continuing operations) concurrent with the merger and requested the continued listing of its common stock on NASDAQ pending its return to compliance. On April 27, 2017, Jaguar was notified that the Panel determined to grant Jaguar's request for continued listing on NASDAQ. Jaguar's continued listing is subject to the completion of Jaguar's proposed merger with Napo on or before July 31, 2017, and Jaguar's compliance with NASDAQ's $2.5 million stockholders' equity requirement as a result of the merger.

Another requirement for continued listing on The NASDAQ Capital Market is the minimum bid requirement. The closing bid price for Jaguar common stock must remain at or above $1.00 per share to comply with NASDAQ's minimum bid requirement for continued listing. If the closing bid price for

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Jaguar common stock is less than $1.00 per share for 30 consecutive business days, NASDAQ may send Jaguar a notice stating Jaguar will be provided a period of 180 days to regain compliance with the minimum bid requirement or else NASDAQ may make a determination to delist Jaguar common stock. Jaguar common stock traded for less than $1.00 for 30 consecutive business days, and Jaguar received notice of this from The NASDAQ Capital Market on May 16, 2017. Jaguar has a 180 calendar day grace period, or until November 13, 2017, to regain compliance with the minimum bid price requirement. The minimum bid price requirement will be met if Jaguar common stock has a minimum closing bid price of at least $1.00 per share for a minimum of 10 consecutive business days during the 180 calendar day grace period. Jaguar is diligently working to evidence compliance with all applicable requirements for continued listing on NASDAQ; however, there can be no assurance that Jaguar will be able to regain compliance or that NASDAQ will grant Jaguar a further extension of time to regain compliance, if necessary.

The delisting of Jaguar common stock from NASDAQ may make it more difficult for Jaguar to raise capital on favorable terms in the future. Such a delisting would likely have a negative effect on the price of Jaguar common stock and would impair your ability to sell or purchase Jaguar common stock when you wish to do so. Further, if Jaguar were to be delisted from The NASDAQ Capital Market, Jaguar common stock would cease to be recognized as covered securities and Jaguar would be subject to regulation in each state in which it offers its securities.

While Jaguar presented a plan to regain compliance, there can be no assurance that its plan will be successful. Moreover, there is no assurance that any actions that Jaguar takes to restore its compliance with NASDAQ's listing requirements would stabilize the market price or improve the liquidity of Jaguar common stock, prevent Jaguar common stock from falling below the NASDAQ minimum bid price required for continued listing again or prevent future non-compliance with NASDAQ's listing requirements.

If Jaguar's shares become subject to the penny stock rules, it would become more difficult to trade Jaguar's shares.

The SEC has adopted rules that regulate broker-dealer practices in connection with transactions in penny stocks. Penny stocks are generally equity securities with a price of less than $5.00, other than securities registered on certain national securities exchanges or authorized for quotation on certain automated quotation systems, provided that current price and volume information with respect to transactions in such securities is provided by the exchange or system. If Jaguar does not retain a listing on The NASDAQ Capital Market and if the price of Jaguar common stock is less than $5.00, Jaguar common stock will be deemed a penny stock. The penny stock rules require a broker-dealer, before a transaction in a penny stock not otherwise exempt from those rules, to deliver a standardized risk disclosure document containing specified information. In addition, the penny stock rules require that before effecting any transaction in a penny stock not otherwise exempt from those rules, a broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive (i) the purchaser's written acknowledgment of the receipt of a risk disclosure statement; (ii) a written agreement to transactions involving penny stocks and (iii) a signed and dated copy of a written suitability statement. These disclosure requirements may have the effect of reducing the trading activity in the secondary market for Jaguar common stock, and therefore stockholders may have difficulty selling their shares.

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The price of Jaguar common stock could be subject to volatility related or unrelated to Jaguar's operations, and purchasers of Jaguar common stock could incur substantial losses.

The trading price of Jaguar common stock could be subject to wide fluctuations in response to various factors, some of which are beyond Jaguar's control. These factors include those discussed previously in this "Risk Factors" section of this report and others, such as:

- delays in the commercialization of Neonorm, Canalevia, Equilevia or Jaguar's other current or future prescription drug product candidates and non-prescription products;
- any delays in, or suspension or failure of, Jaguar's current and future studies;
- announcements of regulatory approval or disapproval of any of Jaguar's current or future product candidates or of regulatory actions affecting Jaguar or its industry;
- manufacturing and supply issues that affect product candidate or product supply for Jaguar's studies or commercialization efforts;
- quarterly variations in Jaguar's results of operations or those of Jaguar's competitors;
- changes in Jaguar's earnings estimates or recommendations by securities analysts;
- the payment of licensing fees or royalties in shares of Jaguar common stock;
- announcements by Jaguar or its competitors of new prescription drug products or product candidates or non-prescription products, significant contracts, commercial relationships, acquisitions or capital commitments;
- announcements relating to future development or license agreements including termination of such agreements;
- adverse developments with respect to Jaguar's intellectual property rights or those of Jaguar's principal collaborators;
- commencement of litigation involving Jaguar or its competitors;
- any major changes in Jaguar's board of directors or management;
- new legislation in the United States relating to the prescription, sale, distribution or pricing of animal health products;
- product liability claims, other litigation or public concern about the safety of Jaguar's prescription drug product candidates and non-prescription products or any such future products;
- market conditions in the animal industry, in general, or in the animal health sector, in particular, including performance of Jaguar's competitors; and

general economic conditions in the United States and abroad.

In addition, the stock market, in general, or the market for stocks in Jaguar's industry, in particular, may experience broad market fluctuations, which may adversely affect the market price or liquidity of Jaguar common stock. Any sudden decline in the market price of Jaguar common stock could trigger securities class-action lawsuits against Jaguar. If any of Jaguar's stockholders were to bring such a lawsuit against Jaguar, Jaguar could incur substantial costs defending the lawsuit and the time and attention of Jaguar's management would be diverted from its business and operations. Jaguar also could be subject to damages claims if it were found to be at fault in connection with a decline in its stock price.

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No active market for Jaguar common stock exists or may develop, and you may not be able to resell Jaguar common stock at or above the public offering price.

Prior to Jaguar's initial public offering in May 2015, there was no public market for shares of Jaguar common stock. The listing of Jaguar common stock on The NASDAQ Capital Market does not assure that a meaningful, consistent and liquid trading market exists. Although Jaguar common stock is listed on The NASDAQ Capital Market, trading volume in Jaguar common stock has been limited and an active trading market for Jaguar shares my never develop or be sustained. If an active market for Jaguar common stock does not develop, you may be unable to sell your shares when you wish to sell them or at a price that you consider attractive or satisfactory. The lack of an active market may also adversely affect Jaguar's ability to raise capital by selling securities in the future, or impair Jaguar's ability to license or acquire other product candidates, businesses or technologies using Jaguar's shares as consideration.

The sale of Jaguar common stock to Aspire Capital may cause substantial dilution to Jaguar's existing stockholders and the sale of the shares of common stock acquired by Aspire Capital could cause the price of Jaguar common stock to decline.

On June 8, 2016, Jaguar entered into the CSPA with Aspire Capital, in which Aspire Capital committed to purchase, at Jaguar's election, up to an aggregate of $15.0 million shares of Jaguar common stock over a period of approximately 30 months (i.e., 30 months from July 8, 2016, the effective date of the initial registration statement on Form S-1 that Jaguar filed to register the shares that it issued and may issue to Aspire pursuant to the CSPA).

Through June 26, 2017, Jaguar has issued 3,702,859 shares of Jaguar common stock to Aspire Capital under the CSPA for gross proceeds of approximately $3.9 million. Jaguar may ultimately sell all, some or none of the approximately $11.1 million of common stock remaining under the CSPA to Aspire Capital, and Aspire Capital may sell all, some or none of Jaguar shares that it holds or comes to hold under the CSPA. Sales by Aspire Capital of shares acquired pursuant to the CSPA may result in dilution to the interests of other holders of Jaguar common stock. The sale of a substantial number of shares of Jaguar common stock by Aspire Capital, or anticipation of such sales, could make it more difficult for Jaguar to sell equity or equity-related securities in the future at a time and at a price that Jaguar might otherwise wish to effect sales. However, Jaguar has the right to control the timing and amount of sales of its shares to Aspire Capital, and the CSPA may be terminated by Jaguar at any time at its discretion without any penalty or cost to Jaguar.

If securities or industry analysts do not publish research or reports about Jaguar, or if they issue adverse or misleading opinions regarding Jaguar or its stock, Jaguar's stock price and trading volume could decline.

The trading market for Jaguar common stock depends in part on the research and reports that industry or financial analysts publish about Jaguar or its business. Jaguar does not influence or control the reporting of these analysts. If one or more of the analysts who do cover Jaguar downgrade or provide a negative outlook on Jaguar or its industry, or the stock of any of its competitors, the price of its common stock could decline. If one or more of these analysts ceases coverage of Jaguar, Jaguar could lose visibility in the market, which in turn could cause the price of Jaguar common stock to decline.

You may be diluted by exercises of outstanding options and warrants.

As of December 31, 2016, Jaguar had outstanding options to purchase an aggregate of 2,571,220 shares of Jaguar common stock at a weighted average exercise price of $2.52 per share and warrants to purchase an aggregate of 5,968,876 shares of Jaguar common stock at a weighted-average exercise price of $1.40 per share.

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In addition, Jaguar will assume outstanding options and warrants to purchase shares of Napo common stock in the merger. Each outstanding option and warrant to acquire Napo common stock will be converted automatically at the effective time of the merger into an option or warrant to acquire Jaguar common stock. The number of shares of Jaguar common stock for which each option or warrant is exercisable will be equal to the product of the number of shares of Napo common stock previously subject to the Napo option or warrant and 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger), rounded down to the next whole share, and the exercise price of each option or warrant will be equal to the exercise price for each share of Napo common stock previously subject to the option or warrant immediately prior to completion of the merger, divided by 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger), rounded up to the nearest whole cent. In addition, in connection with Napo's debt settlement with an existing creditor, upon consummation of the merger, Jaguar expects to issue warrants exercisable for an aggregate of 1,224,874 shares of Jaguar common stock at an exercise price of $0.08 per share.

The exercise of such options and warrants will result in further dilution of your investment. In addition, you may experience additional dilution if Jaguar issues common stock in the future. As a result of this dilution, you may receive significantly less in net tangible book value than the full purchase price you paid for the shares in the event of liquidation.

Provisions in Jaguar's charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable and may lead to entrenchment of management.

Jaguar's second amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could delay or prevent changes in control or changes in Jaguar's management without the consent of Jaguar's board of directors. These provisions to include the following:

- a classified board of directors with three-year staggered terms, which may delay the ability of stockholders to change the membership of a majority of Jaguar's board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- the exclusive right of Jaguar's board of directors to elect a director to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on Jaguar's board of directors;
- the ability of Jaguar's board of directors to authorize the issuance of shares of preferred stock and to determine the terms of those shares, including preferences and voting rights, without stockholder approval, which could adversely affect the rights of Jaguar's common stockholders or be used to deter a possible acquisition of Jaguar;
- the ability of Jaguar's board of directors to alter its bylaws without obtaining stockholder approval;
- the required approval of the holders of at least 75% of the shares entitled to vote at an election of directors to adopt, amend or repeal Jaguar's bylaws or repeal the provisions of Jaguar's second amended and restated certificate of incorporation regarding the election and removal of directors;

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- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of Jaguar's stockholders;

- the requirement that a special meeting of stockholders may be called only by the chairman of the board of directors, the chief executive officer, the president or the board of directors, which may delay the ability of Jaguar's stockholders to force consideration of a proposal or to take action, including the removal of directors; and

- advance notice procedures that stockholders must comply with in order to nominate candidates to Jaguar's board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of Jaguar.

These provisions could inhibit or prevent possible transactions that some stockholders may consider attractive.

Jaguar is also subject to the anti-takeover provisions contained in Section 203 of the Delaware General Corporation Law. Under Section 203, a corporation generally may not engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other exceptions, the board of directors has approved the transaction.

Jaguar's amended and restated bylaws designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain actions and proceedings that may be initiated by Jaguar's stockholders, which could limit Jaguar stockholders' ability to obtain a favorable judicial forum for disputes with Jaguar or its directors, officers or other employees.

Jaguar's amended and restated bylaws provide that, unless Jaguar consents in writing to an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on Jaguar's behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee to Jaguar or its stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, (iv) any action asserting a claim that is governed by the internal affairs doctrine or (v) any action to interpret, apply, enforce or determine the validity of Jaguar's certificate of incorporation or bylaws. Any person purchasing or otherwise acquiring any interest in any shares of Jaguar's capital stock shall be deemed to have notice of and to have consented to this provision of Jaguar's amended and restated bylaws. This choice-of-forum provision may limit Jaguar stockholders' ability to bring a claim in a judicial forum that it finds favorable for disputes with Jaguar or its directors, officers or other employees, which may discourage such lawsuits. Alternatively, if a court were to find this provision of Jaguar's amended and restated bylaws inapplicable or unenforceable with respect to one or more of the specified types of actions or proceedings, Jaguar may incur additional costs associated with resolving such matters in other jurisdictions, which could harm Jaguar's business and financial condition.

Jaguar does not intend to pay dividends on its common stock, and your ability to achieve a return on your investment will depend on appreciation in the market price of Jaguar common stock.

Jaguar currently intends to invest its future earnings, if any, to fund Jaguar's growth and not to pay any cash dividends on its common stock. Moreover, upon consummation of the merger, so long as Nantucket or any of its affiliates owns any shares of Jaguar non-voting common stock, Jaguar cannot pay dividends on its common stock or non-voting common stock without obtaining the prior written consent of Nantucket. Because Jaguar does not intend to pay dividends and may be required to obtain written consent following the merger if it were to do so, your ability to receive a return on your investment will depend on any future appreciation in the market price of Jaguar common stock. Jaguar cannot be certain that Jaguar common stock will appreciate in price.

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Jaguar principal stockholders own a significant percentage of Jaguar's stock and will be able to exert significant control over matters subject to stockholder approval.

As of June 26, 2017, Jaguar's executive officers, directors, holders of 5% or more of Jaguar capital stock and their respective affiliates beneficially owned in the aggregate approximately 56.1% of Jaguar outstanding shares of common stock. Immediately following completion of the merger, Jaguar stockholders immediately prior to the merger will own approximately 25% of Jaguar's outstanding common stock and non-voting common stock and the Napo Stakeholders will own approximately 75% of Jaguar's outstanding common stock and non-voting common stock, with Nantucket owning approximately 46.5% of Jaguar's outstanding common stock and non-voting common stock, in each case calculated based on a fully diluted basis of Jaguar as of March 31, 2017, assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more. As a result of their stock ownership, these stockholders may have the ability to influence Jaguar's management and policies, and will be able to significantly affect the outcome of matters requiring stockholder approval such as elections of directors, amendments of Jaguar's organizational documents or approvals of any merger, sale of assets or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for Jaguar common stock that you may feel are in your best interest as one of Jaguar's stockholders.

The requirements of being a public company, including compliance with the reporting requirements of the Exchange Act and the requirements of the Sarbanes-Oxley Act, may strain Jaguar's resources, increase Jaguar's costs and distract management, and Jaguar may be unable to comply with these requirements in a timely or cost-effective manner.

Jaguar's initial public offering had a significant, transformative effect on Jaguar. Prior to Jaguar initial public offering, Jaguar's business operated as a privately-held company, and Jaguar was not required to comply with public reporting, corporate governance and financial accounting practices and policies required of a publicly-traded company. As a publicly-traded company, Jaguar incurs significant additional legal, accounting and other expenses compared to historical levels. In addition, new and changing laws, regulations and standards relating to corporate governance and public disclosure, including the Dodd-Frank Wall Street Reform and Consumer Protection Act and the rules and regulations thereunder, as well as under the Sarbanes-Oxley Act, the JOBS Act and the rules and regulations of the SEC and The NASDAQ Capital Market, may result in an increase in Jaguar's costs and the time that Jaguar's board of directors and management must devote to Jaguar's compliance with these rules and regulations. These rules and regulations have substantially increased Jaguar's legal and financial compliance costs and diverted management time and attention from Jaguar's product development and other business activities.

The Sarbanes-Oxley Act requires, among other things, that Jaguar assess the effectiveness of its internal control over financial reporting annually and the effectiveness of Jaguar's disclosure controls and procedures quarterly. In particular, Section 404 of the Sarbanes-Oxley Act, or Section 404, requires Jaguar to perform system and process evaluation and testing of Jaguar's internal control over financial reporting to allow management to report on, and Jaguar's independent registered public accounting firm potentially to attest to, the effectiveness of Jaguar's internal control over financial reporting. Jaguar has needed to expend time and resources on documenting its internal control over financial reporting so that Jaguar is in a position to perform such evaluation when required. As an "emerging growth company," Jaguar expects to avail itself of the exemption from the requirement that its independent registered public accounting firm attest to the effectiveness of its internal control over financial reporting under Section 404. However, Jaguar may no longer avail itself of this exemption when it ceases to be an "emerging growth company." When Jaguar's independent registered public accounting firm is required to undertake an assessment of its internal control over financial reporting,

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the cost of Jaguar's compliance with Section 404 will correspondingly increase. Jaguar's compliance with applicable provisions of Section 404 requires that Jaguar incur substantial accounting expense and expend significant management time on compliance-related issues as Jaguar implements additional corporate governance practices and comply with reporting requirements. Moreover, if Jaguar is not able to comply with the requirements of Section 404 applicable to Jaguar in a timely manner, or if Jaguar or its independent registered public accounting firm identifies deficiencies in Jaguar's internal control over financial reporting that are deemed to be material weaknesses, the market price of Jaguar's stock could decline and Jaguar could be subject to sanctions or investigations by the SEC or other regulatory authorities, which would require additional financial and management resources.

Jaguar is an "emerging growth company" and it cannot be certain if the reduced disclosure requirements applicable to "emerging growth companies" will make its common stock less attractive to investors.

Jaguar is an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and Jaguar may take advantage of certain exemptions and relief from various reporting requirements that are applicable to other public companies that are not "emerging growth companies." In particular, while Jaguar is an "emerging growth company" (i) it will not be required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act, (ii) it will be subject to reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements and (iii) it will not be required to hold nonbinding advisory votes on executive compensation or stockholder approval of any golden parachute payments not previously approved. In addition, the JOBS Act provides that an emerging growth company can delay its adoption of any new or revised accounting standards, but Jaguar has irrevocably elected not to avail itself of this exemption and, therefore, Jaguar will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. In addition, investors may find Jaguar common stock less attractive if Jaguar relies on the exemptions and relief granted by the JOBS Act. If some investors find Jaguar common stock less attractive as a result, there may be a less active trading market for Jaguar common stock and Jaguar's stock price may decline and/or become more volatile.

Jaguar may remain an "emerging growth company" until as late as December 31, 2020 (the fiscal year-end following the fifth anniversary of the closing of Jaguar's initial public offering, which occurred on May 18, 2015), although Jaguar may cease to be an "emerging growth company" earlier under certain circumstances, including (i) if the market value of Jaguar common stock that is held by non-affiliates exceeds $700.0 million as of any June 30, in which case Jaguar would cease to be an "emerging growth company" as of December 31 of such year, (ii) if Jaguar's gross revenue exceeds $1.0 billion in any fiscal year or (iii) if Jaguar issues more than $1.0 billion of non-convertible debt over a three-year period.

Risks Related to Napo's Business

Napo has a limited operating history and may be unable to achieve or sustain profitability or continue as a going concern.

Since Napo's formation in 2001, its operations have been primarily limited to the research and development of Napo's lead prescription drug product, Mytesi. Net sales of Mytesi since June 2016 when Napo initiated sales of Mytesi have been $955,220 through December 31, 2016. In the quarter ended March 31, 2017 Mytesi net sales were $518,133. Napo's net loss and comprehensive loss for the year ended December 31, 2016 was $20,393,028 and the net loss was $2,927,949 in the quarter ended March 31, 2017. As more fully described in Note 1 to Napo's financial statements included in this joint proxy statement/prospectus, Napo believes there is substantial doubt about its ability to continue as a going concern as it does not currently have sufficient cash resources to fund its operations through March 24, 2018, one year from the date its audited financial statements were originally issued.

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Napo expects to incur significant additional costs as it continues commercialization efforts for current prescription drug product candidates or other product candidates, and undertake the clinical trials necessary to obtain related regulatory approvals.

Napo is actively identifying additional products for development and commercialization, and will continue to expend substantial resources for the foreseeable future to develop products from Napo's proprietary library of more than 2,300 medicinal plants. These expenditures will include costs associated with:

identifying additional potential prescription drug product candidates and non-prescription products;

formulation studies;

conducting pilot, pivotal and toxicology studies;

completing other research and development activities;

payments to technology licensors;

maintaining Napo's intellectual property;

obtaining necessary regulatory approvals;

establishing commercial supply capabilities; and

sales, marketing and distribution of Napo's commercialized products.

Napo also may incur unanticipated costs in connection with developing and commercializing Napo's products. Because the outcome of Napo's development activities and commercialization efforts is inherently uncertain, the actual amounts necessary to successfully complete the development and commercialization of Napo's current or future products and product candidates may be greater than Napo anticipates.

Because Napo anticipates incurring significant costs for the foreseeable future, if Napo is not successful in broadly commercializing any of Napo's current or future products or product candidates or raising additional funding to pursue Napo's research and development efforts, Napo may never realize the benefit of its development efforts and Napo's business may be harmed.

Napo will need to raise substantial additional capital in the future to fund Napo's operations and Napo may be unable to raise such funds when needed and on acceptable terms, which would force Napo to delay, limit, reduce or terminate one or more of Napo's product development programs or future commercialization efforts.

Napo currently has limited commercial operations and its primary source of revenue is from the sale of Mytesi. Other current potential revenue sources are limited to the third parties who have licensed or may license Napo's intellectual property and technology, or collaborate with Napo in the future. Napo was involved in litigation with Salix and expended significant resources in the litigation and subsequent settlement. At the time of the formation of Jaguar, Napo's liabilities exceeded its assets on a balance sheet prepared in conformity with U.S. generally accepted accounting principles. Napo is forecasting continued losses and negative cash flows as Napo continues to fund its operating and marketing activities and research and development programs, and to complete the development of all the current products in Napo's pipeline, or any additional products Napo may identify. Napo may need to seek additional funds sooner than planned through public or private equity or debt financings or other sources such as strategic collaborations. Other than Napo's Amended and Restated Note Purchase Agreement (sometimes referred to herein as the Kingdon NPA) with Kingdon Associates, M. Kingdon Offshore Master Fund L.P., Kingdon Family Partnership, L.P., and Kingdon Credit Master Fund L.P. and convertible note purchase agreement with two lenders, Napo has no current agreements

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or arrangements with respect to any such financings or collaborations, and any such financings or collaborations may result in dilution to Napo's stockholders, the imposition of debt covenants and repayment obligations or other restrictions that may harm Napo's business or the value of Napo's common stock. Napo may also seek from time to time to raise additional capital based upon favorable market conditions or strategic considerations such as potential license arrangements.

Napo's future capital requirements depend on many factors, including, but not limited to:

- the scope, progress, results and costs of researching and developing Napo's current and future prescription drug product candidates;
- the timing of, and the costs involved in, obtaining any regulatory approvals for Napo's current and any future products;
- the number and characteristics of the products Napo pursues;
- the cost of manufacturing Napo's current and future products and any products Napo successfully commercializes;
- the cost of commercialization activities for Napo's prescription drug product candidates and other products, if approved, including sales, marketing and distribution costs;
- the expenses needed to attract and retain skilled personnel;
- Napo's ability to establish and maintain strategic collaborations, distribution or other arrangements and the financial terms of such agreements; and
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing possible patent claims, including litigation costs and the outcome of any such litigation.

Additional funds may not be available when Napo needs them on terms that are acceptable to Napo, or at all. If adequate funds are not available to us on a timely basis, Napo may be required to delay, limit, reduce or terminate one or more of its product development programs or future commercialization efforts.

Napo is substantially dependent on the success of Mytesi, and cannot be certain that drug product candidates currently in Napo's product pipeline will be approved or that Napo will be able to successfully commercialize these product candidates.

Other than Mytesi, Napo currently does not have regulatory approval for any of its prescription drug product candidates. Napo's current efforts are primarily focused on the commercial launch of Mytesi in the United States, and development efforts related to CID, institutional diarrhea, secretory diarrhea, IBS-D, pediatric general watery diarrhea, Napo's orphan drug (Channelopathies) drug product candidate, and cholera/ general watery diarrhea. Accordingly, Napo's near-term prospects, including Napo's ability to generate material product revenue, obtain any new financing if needed to fund Napo's business and operations or enter into potential strategic transactions, will depend heavily on the success of Mytesi.

Substantial time and capital resources have been previously devoted by third parties in the development of crofelemer, the active pharmaceutical ingredient, or API, in Mytesi. Crofelemer was originally developed at Shaman Pharmaceuticals, Inc., or Shaman, by certain members of Napo's management team, including Lisa A. Conte, Napo's founder and interim CEO, and Steven R. King, Ph.D., Napo's Executive Vice President, Sustainable Supply, Ethnobotanical Research and Intellectual Property and Secretary. Shaman spent significant development resources before voluntarily filing for bankruptcy in 2001 pursuant to Chapter 11 of the U.S. Bankruptcy Code. The rights to crofelemer, as well as other intellectual property rights, were subsequently acquired by Napo from Shaman in 2001 pursuant to a court approved sale of assets. Ms. Conte founded Napo in 2001 and is the current

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interim chief executive officer of Napo and a member of its board of directors. While at Napo, certain members of Napo's management team, including Ms. Conte and Dr. King, continued the development of crofelemer. In 2005, Napo entered into license agreements with Glenmark Pharmaceuticals Ltd., or Glenmark, and Luye Pharma Group Limited for rights to various human indications of crofelemer in certain territories as defined in the respective license agreements with these licensees. To date, Napo has not realized any royalty revenue from these licensees. Subsequently, after expending significant sums developing crofelemer, including trial design and on-going patient enrollment in the final pivotal Phase 3 trial for crofelemer for non-infectious diarrhea in adults with HIV/AIDS on antiretroviral therapy, in late 2008, Napo entered into a collaboration agreement with Salix Pharmaceuticals, Inc., or Salix, for development and commercialization rights to certain indications worldwide and certain rights in North America, Europe, and Japan, to crofelemer for human use. In May 2011, Napo sued Salix with regard to Salix's performance under the collaboration agreement. In February 2014, Salix prevailed in a jury trial, and Napo appealed the verdict. In March 2016, Napo and Salix entered into a Settlement, Termination, Asset Transfer and Transition Agreement, which settled the ongoing litigation between the parties, terminated the Salix Collaboration Agreement and transferred certain assets and inventory, including with respect to the approved drug Mytesi®, to Napo. If Napo is not successful in the development and commercialization of Mytesi, Napo's business and Napo's prospects will be harmed.

The successful development and commercialization of the prescription drug product candidates in Napo's product pipeline, if approved, will depend on a number of factors, including the following:

- the successful completion of pivotal trials and toxicology studies, which may take significantly longer than Napo currently anticipate and will depend, in part, upon the satisfactory performance of third-party contractors;
- Napo's ability to demonstrate to the satisfaction of the FDA and any other regulatory bodies, the safety and efficacy of its prescription drug product candidates;
- Napo's ability and that of Napo's contract manufacturers to manufacture supplies of approved Napo prescription drug product candidates and to develop, validate and maintain viable commercial manufacturing processes that are compliant with current good manufacturing practices, or cGMP, if required;
- Napo's ability to successfully launch its prescription drug product candidates, assuming approval is obtained, whether alone or in collaboration with others;
- the availability, perceived advantages, relative cost, relative safety and relative efficacy of Napo's prescription drug product candidates compared to alternative and competing treatments;
- the acceptance of Napo's prescription drug product candidates as safe and effective by physicians, patients and the health community;
- Napo's ability to achieve and maintain compliance with all regulatory requirements applicable to Napo's business; and
- Napo's ability to obtain and enforce its intellectual property rights and obtain marketing exclusivity for Napo's prescription drug product candidates and avoid or prevail in any third-party patent interference, patent infringement claims or administrative patent proceedings initiated by third parties or the U.S. Patent and Trademark Office, or USPTO.

Many of these factors are beyond Napo's control. Accordingly, Napo may not be successful in developing or commercializing its current prescription drug product candidates or other potential products. If Napo is unsuccessful or is significantly delayed in developing and commercializing its current prescription drug product candidates or other potential products, Napo's business and prospects

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will be harmed and you may lose all or a portion of the value of your investment in Napo, or, if and when the merger between Napo and Jaguar becomes effective, in Jaguar's common stock.

If Napo is not successful in identifying, licensing, developing and commercializing additional product candidates and products, Napo's ability to expand its business and achieve its strategic objectives could be impaired.

Although a substantial amount of Napo's efforts are focused on the commercial launch of Mytesi and the continued development and potential approvals of its current prescription drug product candidates, a key element of Napo's strategy is to identify, develop and commercialize a portfolio of products to serve the gastrointestinal health market. Most of Napo's potential products are based on Napo's knowledge of medicinal plants. Napo's current focus is primarily on product candidates whose active pharmaceutical ingredient or botanical extract has been successfully commercialized or demonstrated to be safe and effective in human trials. In some instances, Napo may be unable to further develop these potential products because of perceived regulatory and commercial risks. Even if Napo successfully identifies potential products, Napo may still fail to yield products for development and commercialization for many reasons, including the following:

- competitors may develop alternatives that render Napo's potential products obsolete;
- potential products Napo seeks to develop may be covered by third-party patents or other exclusive rights;
- a potential product may on further study be shown to have harmful side effects or other characteristics that indicate it is unlikely to be effective or otherwise does not meet applicable regulatory criteria;
- a potential product may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- a potential product may not be accepted as safe and effective by physicians, patients, key opinion leaders and other decision-makers in the gastrointestinal health market.

While Napo plans to develop specific formulations, methods of administration, new patents and other strategies with respect to its current potential products, Napo may be unable to prevent competitors from developing substantially similar products and bringing those products to market earlier than Napo can. If such competing products achieve regulatory approval and commercialization prior to Napo's potential products, Napo's competitive position may be impaired. If Napo fails to develop and successfully commercialize other potential products, Napo's business and future prospects may be harmed and Napo will be more vulnerable to any problems that it encounters in developing and commercializing it current potential products.

Napo may be unable to obtain, or obtain on a timely basis, regulatory approval for its existing or future prescription drug product candidates under applicable regulatory requirements, which would harm Napo's operating results.

The research, testing, manufacturing, labeling, approval, sale, marketing and distribution of health products are subject to extensive regulation. Napo is usually not permitted to market its prescription drug product candidates in the United States until it receives approval of an NDA from the FDA. To gain approval to market a prescription drug, Napo must provide the FDA with safety and efficacy data from pivotal trials that adequately demonstrate that Napo's prescription drug product candidates are safe and effective for the intended indications. In addition, Napo must provide manufacturing data evidencing that Napo produce its product candidates in accordance with cGMP. In addition to Napo's internal activities, Napo will partially rely on contract research organizations, or CROs, and other third parties to conduct studies and for certain other development activities. The results of studies and other

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initial development activities, and of any previous studies conducted by Napo or third parties, may not be predictive of future results of pivotal trials or other future studies, and failure can occur at any time during the conduct of pivotal trials and other development activities by Napo or Napo's CROs. Napo's pivotal trials may fail to show the desired safety or efficacy of Napo's prescription drug product candidates despite promising initial data or the results in previous studies conducted by others, and success of a prescription drug product candidate in prior studies does not ensure success in subsequent studies. Clinical trials sometimes fail to show a benefit even for drugs that are effective because of statistical limitations in the design of the trials or other statistical anomalies. Therefore, even if Napo's studies and other development activities are completed as planned, the results may not be sufficient to obtain a required regulatory approval for a product candidate.

Regulatory authorities can delay, limit or deny approval of any of Napo's prescription drug product candidates for many reasons, including:

if they disagree with Napo's interpretation of data from its pivotal studies or other development efforts;

if Napo is unable to demonstrate to their satisfaction that its product candidate are safe and effective for the target indication;

if they require additional studies or change their approval policies or regulations;

if they do not approve of the formulation, labeling or the specifications of Napo's current and future product candidates; and

if they fail to approve the manufacturing processes of Napo's third-party contract manufacturers.

Further, even if Napo receives a required approval, such approval may be for a more limited indication than Napo originally requested, and the regulatory authority may not approve the labeling that Napo believes is necessary or desirable for successful commercialization.

Any delay or failure in obtaining any necessary regulatory approval for the intended indications of Napo's product candidates would delay or prevent commercialization of such product candidates and would harm Napo's business and its operating results.

The results of Napo's earlier studies of Mytesi may not be predictive of the results in any future clinical trials, and Napo may not be successful in its efforts to develop or commercialize line extensions of Mytesi.

Napo's product pipeline includes a number of potential indications of Mytesi, Napo's lead product. The results of Napo's studies and other initial development activities and of any previous studies conducted by us or third parties may not be predictive of results of these future clinical trials. Failure can occur at any time during the conduct of these trials and other development activities. Even if Napo's formulation studies and other development activities are completed as planned, the results may not be sufficient to pursue a particular line extension for Mytesi. Further, even if Napo obtains promising results from its clinical trials, Napo may not successfully commercialize any line extension. Because line extensions are developed for a particular market, Napo may not be able to leverage its experience from the commercial launch of Mytesi in new markets. If Napo is not successful in developing and successfully commercializing these line extension products, Napo may not be able to grow its revenue and its business may be harmed.

Development of prescription drug products is inherently expensive, time-consuming and uncertain, and any delay or discontinuance of Napo's current or future pivotal trials would harm Napo's business and prospects.

Development of prescription drug products for remains an inherently lengthy, expensive and uncertain process, and Napo's development activities may not be successful. Napo management does not know whether Napo's current or planned pivotal trials for any of its product candidates will begin

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or conclude on time, and trials may be delayed or discontinued for a variety of reasons, including if Napo is unable to:

- address any safety concerns that arise during the course of the studies;
- complete the studies due to deviations from the study protocols or the occurrence of adverse events;
- add new study sites;
- address any conflicts with new or existing laws or regulations; or
- reach agreement on acceptable terms with study sites, which can be subject to extensive negotiation and may vary significantly among different sites.

Further, Napo may not be successful in developing new indications for Mytesi. Any delays in completing Napo's development efforts will increase Napo's costs, delay Napo's development efforts and approval process and jeopardize Napo's ability to commence product sales and generate revenue. Any of these occurrences may harm Napo's business, financial condition and prospects. In addition, factors that may cause a delay in the commencement or completion of Napo's development efforts may also ultimately lead to the denial of regulatory approval of Napo's product candidates which, as described above, would harm Napo's business and prospects.

Napo will partially rely on third parties to conduct development activities. If these third parties do not successfully carry out their contractual duties, Napo may be unable to obtain regulatory approvals or commercialize its current or future product candidates on a timely basis, or at all.

Napo will partially rely upon CROs to conduct its toxicology studies and for other development activities. These CROs are not Napo employees, and except for contractual duties and obligations, Napo has limited ability to control the amount or timing of resources that they devote to Napo programs or manage the risks associated with their activities on Napo's behalf. Napo is responsible for ensuring that each of Napo study is conducted in accordance with the development plans and trial protocols presented to regulatory authorities. Any deviations by Napo's CROs may adversely affect Napo's ability to obtain regulatory approvals, subject Napo to penalties or harm Napo's credibility with regulators. The FDA and foreign regulatory authorities also require Napo and its CROs to comply with regulations and standards, commonly referred to as good clinical practices, or GCPs, or good laboratory practices, or GLPs, for conducting, monitoring, recording and reporting the results of Napo studies to ensure that the data and results are scientifically valid and accurate.

Agreements with CROs generally allow the CROs to terminate in certain circumstances with little or no advance notice. These agreements generally will require Napo's CROs to reasonably cooperate with Napo at Napo's expense for an orderly winding down of the CROs' services under the agreements. If the CROs conducting Napo's studies do not comply with their contractual duties or obligations, or if they experience work stoppages, do not meet expected deadlines, or if the quality or accuracy of the data they obtain is compromised, Napo may need to secure new arrangements with alternative CROs, which could be difficult and costly. In such event, Napo's studies also may need to be extended, delayed or terminated as a result, or may need to be repeated. If any of the foregoing were to occur, regulatory approval, if required, and commercialization of Napo's product candidates may be delayed and Napo may be required to expend substantial additional resources.

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Even if Napo obtains regulatory approval for its current prescription drug product candidates or other product candidates, these product candidates may never achieve market acceptance. Further, even if Napo is successful in commercially launching Mytesi, it may not achieve commercial success.

If Napo obtain necessary regulatory approvals for its current prescription drug product candidates or other product candidates, such products may still not achieve market acceptance and may not be commercially successful. Market acceptance of Napo's current prescription drug product candidates or other product candidates depends on a number of factors, including:

- the safety of Napo's products as demonstrated in Napo's studies;
- the indications for which Napo's products are approved or marketed;
- the potential and perceived advantages over alternative treatments or products, including generic medicines and competing products currently prescribed by physicians, and products approved for use in humans that are used extra-label;
- the acceptance by physicians and patients of Napo's products as safe and effective;
- the cost in relation to alternative treatments and willingness on the part of physicians and patients to pay for Napo's products;
- the prevalence and severity of any adverse side effects of Napo's products;
- the relative convenience and ease of administration of Napo's products; and
- the effectiveness of Napo's sales, marketing and distribution efforts.

Any failure by Napo's current any of Napo's other products to achieve market acceptance or commercial success would harm Napo's financial condition and results of operations.

Human products are subject to unanticipated post-approval safety or efficacy concerns, which may harm Napo's business and reputation.

The success of Napo's commercialization efforts will depend upon the perceived safety and effectiveness of health products, in general, and of Napo's products, in particular. Unanticipated safety or efficacy concerns can subsequently arise with respect to approved prescription drug products, such as Mytesi, which may result in product recalls or withdrawals or suspension of sales, as well as product liability and other claims. Any safety or efficacy concerns, or recalls, withdrawals or suspensions of sales of Napo's products derived from *Croton lechleri* could harm Napo's reputation and business, regardless of whether such concerns or actions are justified.

If Napo fails to retain current members of its senior management, or to identify, attract, integrate and retain additional key personnel, Napo's business will be harmed.

Napo's success depends on its continued ability to attract, retain and motivate highly qualified management and scientific personnel. Napo is highly dependent upon its senior management, particularly Lisa A. Conte, Napo's founder and interim chief executive officer. The loss of services of any of Napo's key personnel would cause a disruption in Napo's ability to develop its current or future product pipeline and commercialize its products and product candidates. Although Napo has offer letters with these key members of senior management, such agreements do not prohibit them from resigning at any time. Napo currently does not maintain "key man" life insurance on any of its senior management team. The loss of Ms. Conte or other members of Napo's current senior management could adversely affect the timing or outcomes of Napo's current and planned studies, as well as the prospects for commercializing Napo's products.

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In addition, competition for qualified personnel in the gastrointestinal health field is intense, because there are a limited number of individuals who are trained or experienced in the field. Napo will need to hire additional personnel as it expands its product development and commercialization activities. Even if Napo is successful in hiring qualified individuals, as a growing organization, Napo does not have a track record for integrating and retaining individuals. If Napo is not successful in identifying, attracting, integrating or retaining qualified personnel on acceptable terms, or at all, Napo's business will be harmed.

Napo is dependent on two suppliers for the raw material used to produce the active pharmaceutical ingredient in Mytesi. The termination of either of these contracts would result in a disruption to product development and Napo's business will be harmed.

The raw material used to manufacture Mytesi is crude plant latex, or CPL, derived from the *Croton lechleri* tree, which is found in countries in South America, principally Peru. The ability of Napo's contract suppliers to harvest CPL is governed by the terms of their respective agreements with local government authorities. Although CPL is available from multiple suppliers, Napo only has contracts with two suppliers to obtain CPL and arrange the shipment to Napo's contract manufacturer. Accordingly, if Napo's contract suppliers do not or are unable to comply with the terms of Napo's respective agreements, and Napo is not able to negotiate new agreements with alternate suppliers on terms that Napo deems commercially reasonable, it may harm Napo's business and prospects. The countries from which Napo obtain CPL could change their laws and regulations regarding the export of the natural products or impose or increase taxes or duties payable by exporters of such products. Restrictions could be imposed on the harvesting of the natural products or additional requirements could be implemented for the replanting and regeneration of the raw material. Such events could have a significant impact on Napo's cost and ability to produce Mytesi and anticipated line extensions.

Napo is dependent upon third-party contract manufacturers, both for the supply of the active pharmaceutical ingredient in Mytesi as well as for the supply of finished products for commercialization.

Napo is dependent upon its contract manufacturers for the supply of the API in Mytesi. The facilities used by Napo's third-party contractors are subject to inspections, including by the FDA, and other regulators, as applicable. Napo also depends on its third-party contractors to comply with cGMP. If Napo's third-party contractors do not maintain compliance with these strict regulatory requirements, Napo and they will not be able to secure or maintain regulatory approval for their facilities, which would have an adverse effect on Napo's operations. In addition, in some cases, Napo is also dependent on its third-party contractors to produce supplies in conformity to Napo's specifications and maintain quality control and quality assurance practices and not to employ disqualified personnel. If the FDA or a comparable foreign regulatory authority does not approve the facilities of Napo's third-party contractors if so required, or if it withdraws any such approval in the future, Napo may need to find alternative manufacturing or formulation facilities, which could result in delays in Napo's ability to develop or commercialize its products. Napo and Napo's third-party contractors also may be subject to penalties and sanctions from the FDA and other regulatory authorities for any violations of applicable regulatory requirements. The USDA and the European Medicines Agency, or the EMA, employ different regulatory standards than the FDA, so Napo may require multiple manufacturing processes and facilities for the same product candidate or any approved product. Napo is also exposed to risk if its third-party contractors do not comply with the negotiated terms of Napo's agreements, or if they suffer damage or destruction to their facilities or equipment.

Napo will need to increase the size of its organization and may not successfully manage such growth.

As of March 31, 2017 and December 31, 2016, Napo had 1 employee. Napo's ability to manage its growth effectively will require Napo to hire, train, retain, manage and motivate additional employees

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and to implement and improve Napo's operational, financial and management systems. These demands also may require the hiring of additional senior management personnel or the development of additional expertise by Napo's senior management personnel. If Napo fails to expand and enhance its operational, financial and management systems in conjunction with Napo's potential future growth, it could harm Napo's business and operating results.

If Napo's prescription drug product candidates are approved by regulatory authorities, the misuse or extra-label use of such products may harm Napo's reputation or result in financial or other damages.

If Napo's prescription drug product candidates are approved by regulatory authorities, there may be increased risk of product liability if physicians or patients attempt to use such products extra-label, including the use of Napo's products for indications for which they have not been approved. Furthermore, the use of an approved drug for indications other than those indications for which such products have been approved may not be effective, which could harm Napo's reputation and lead to an increased risk of litigation. If Napo is deemed by a governmental or regulatory agency to have engaged in the promotion of any approved product for extra-label use, such agency could request that Napo modify its training or promotional materials and practices and Napo could be subject to significant fines and penalties, and the imposition of these sanctions could also affect Napo's reputation and position within the industry. Any of these events could harm Napo's reputation and Napo's operating results.

The market for Napo's products, and the gastrointestinal health market as a whole, is uncertain and may be smaller than Napo anticipates, which could lead to lower revenue and harm Napo's operating results.

It is very difficult to estimate the commercial potential of any of Napo's products or product candidates because the gastrointestinal health market continues to evolve and it is difficult to predict the market potential for Napo's products. The market will depend on important factors such as safety and efficacy compared to other available treatments, changing standards of care, preferences of physicians, the willingness of patients to pay for such products, and the availability of competitive alternatives that may emerge either during the product development process or after commercial introduction. If the market potential for Napo's products is less than Napo anticipates due to one or more of these factors, it could negatively impact Napo's business, financial condition and results of operations. Further, the willingness of physicians and patients to pay for Napo's products may be less than Napo anticipates, and may be negatively affected by overall economic conditions.

Napo may engage in future acquisitions that increase Napo's capital requirements, dilute Napo stockholders, cause Napo to incur debt or assume contingent liabilities and subject Napo to other risks.

Napo may evaluate various strategic transactions, including licensing or acquiring complementary products, technologies or businesses. Any potential acquisitions may entail numerous risks, including increased operating expenses and cash requirements, assimilation of operations and products, retention of key employees, diversion of Napo's management's attention and uncertainties in Napo's ability to maintain key business relationships of the acquired entities. In addition, if Napo undertakes acquisitions, Napo may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense. Moreover, Napo may not be able to locate suitable acquisition opportunities and this inability could impair Napo's ability to grow or obtain access to technology or products that may be important to the development of Napo's business.

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Certain of the countries in which Napo plans to commercialize its products in the future are developing countries, some of which have potentially unstable political and economic climates.

Napo may commercialize its products in jurisdictions that are developing and emerging countries. This may expose Napo to the impact of political or economic upheaval, and Napo could be subject to unforeseen administrative or fiscal burdens. At present, Napo is not insured against the political and economic risks of operating in these countries. Any significant changes to the political or economic climate in any of the developing countries in which Napo operates or plans to sell products either now or in the future may have a substantial adverse effect on Napo's business, financial condition, trading performance and prospects.

Fluctuations in the exchange rate of foreign currencies could result in currency transactions losses.

As Napo expands its operations, Napo expects to be exposed to risks associated with foreign currency exchange rates. Napo anticipates that it will commercialize Mytesi and its line extensions in jurisdictions outside the United States. As a result, Napo will also be further affected by fluctuations in exchange rates in the future to the extent that sales are denominated in currencies other than U.S. dollars. Napo does not currently employ any hedging or other strategies to minimize this risk, although Napo may seek to do so in the future.

Risks Related to Napo's Intellectual Property

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

Periodic maintenance and annuity fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If Napo or its licensors fail to maintain the patents and patent applications covering prescription drug products and candidates, Napo's competitors might be able to enter the market, which would harm Napo's business.

Third parties may initiate legal proceedings alleging that Napo is infringing their intellectual property rights, which would be costly, time-consuming and, if successfully asserted against Napo, delay or prevent the development and commercialization of Napo's current or future products and product candidates.

Napo's research, development and commercialization activities may infringe or otherwise violate or be claimed to infringe or otherwise violate patents owned or controlled by other parties. There may be patents already issued of which Napo is unaware that might be infringed by one of Napo's current or future prescription drug products or candidates or non-prescription drug products or candidates. Moreover, it is also possible that patents may exist that Napo is aware of, but that Napo does not believe are relevant to Napo's current or future prescription drug products or candidates, which could nevertheless be found to block Napo's freedom to market these products. Because patent applications can take many years to issue and may be confidential for 18 months or more after filing, there may be applications now pending of which Napo is unaware and which may later result in issued patents that may be infringed by Napo's current or future prescription drug products or candidates or

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non-prescription products or candidates. Napo cannot be certain that its current or future prescription drug products or candidates or non-prescription products or candidates will not infringe these or other existing or future third-party patents. In addition, third parties may obtain patents in the future and claim that use of Napo's technologies infringes upon these patents.

To the extent Napo becomes subject to future third-party claims against Napo or Napo's collaborators or licensees, Napo could incur substantial expenses and, if any such claims are successful, Napo could be liable to pay substantial damages, including treble damages and attorneys' fees if Napo or Napo's collaborators or licensees are found to be willfully infringing a third party's patents. If a patent infringement suit were brought against Napo or Napo's collaborators, Napo or they could be forced to stop or delay research, development, manufacturing or sales of the prescription drug or non-prescription product that is the subject of the suit. Even if Napo is successful in defending such claims, infringement and other intellectual property claims can be expensive and time-consuming to litigate and divert management's attention from Napo's business and operations. As a result of or in order to avoid potential patent infringement claims, Napo or Napo's collaborators or licensees may be compelled to seek a license from a third party for which Napo would be required to pay license fees or royalties, or both. Moreover, these licenses may not be available on acceptable terms, or at all. Even if Napo or Napo's collaborators or licensees were able to obtain such a license, the rights may be nonexclusive, which could allow Napo's competitors access to the same intellectual property. Any of these events could harm Napo's business and prospects.

There has been substantial litigation regarding patents and other intellectual property rights in the field of therapeutics, as well as patent challenge proceedings, including interference, derivation, *ex parte* reexamination, *inter partes* review and post-grant review proceedings before the USPTO, and oppositions and other comparable proceedings in foreign jurisdictions. In addition to possible infringement claims against Napo may be subject to third-party pre-issuance submission of prior art to the USPTO or foreign patent office, or become involved in opposition, derivation, reexamination, *inter partes* review, post grant review, or other patent office proceedings or litigation in the United States or elsewhere, challenging Napo's patent rights or the patent rights of others. For applications filed before March 16, 2013, or patents issuing from such applications, if third parties have prepared and filed patent applications in the United States that also claim technology to which Napo has rights, Napo may have to participate in interference proceedings in the USPTO to determine the priority of invention or for patent applications filed after March 16, 2013, Napo may have to participate in derivation proceedings in the USPTO to determine if Napo obtained the invention from a third party such that Napo is not entitled to a patent on the invention or a third party had obtained the invention from Napo and Napo is entitled to the patent on the invention. Because patent applications in the United States and most other countries are confidential for a period of time after filing, Napo cannot be certain that Napo was the first to either file patent applications on or invent any of the inventions claimed in Napo's patent applications. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal court necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Napo may also become involved in opposition or similar proceedings in patent offices in other jurisdictions regarding Napo's intellectual property rights with respect to Napo's prescription drug or non-prescription products and technology. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, Napo's present or future patent rights, and, could allow third parties to commercialize Napo's technology or products and compete directly with Napo, without payment to Napo, or result in Napo's inability to manufacture or commercialize products without infringing third-party patent rights.

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Napo's proprietary position depends upon patents that are formulation or method-of-use patents, which do not prevent a competitor from using the same drug candidate for another use.

Composition-of-matter patents on the API in prescription drug products are generally considered to be the strongest form of intellectual property protection because such patents provide protection without regard to any particular method of use or manufacture or formulation of the API used. The composition-of-matter patents for crofelemer, the API in Mytesi, have expired.

Method-of-use patents protect the use of a product for the specified method and formulation patents cover formulations of the API or botanical extract. These types of patents do not prevent a competitor from developing or marketing an identical product for an indication that is outside the scope of the patented method or from developing a different formulation that is outside the scope of the patented formulation. Moreover, with respect to method-of-use patents, even if competitors do not actively promote their product for Napo's targeted indications or uses for which Napo may obtain patents, physicians may recommend that patients use these products extra-label, or patients may do so themselves. Although extra-label use may infringe or contribute to the infringement of method-of-use patents, the practice is common and such infringement is difficult to prevent or prosecute.

If Napo's efforts to protect intellectual property are not adequate, Napo may not be able to compete effectively in Napo's markets.

Napo intends to rely upon a combination of regulatory exclusivity periods, patents, trade secret protection, confidentiality agreements, and license agreements to protect the intellectual property related to Napo's current prescription drug product candidates and Napo's development programs.

If the breadth or strength of protection provided by any patents, patent applications or future patents Napo may own, license, or pursue with respect to any of Napo's current or future product candidates or products is threatened, it could threaten Napo's ability to commercialize any of its current or future product candidates or products. Further, if Napo encounters delays in its development efforts, the period of time during which Napo could market any of its current or future product candidates or products under any patent protection Napo obtains would be reduced. In addition, with respect to patent applications that Napo files on its technology, there is a risk that US or foreign patent offices would not allow and issue patents from the patent applications or the patents that do issue are limited in scope and would not provide sufficient protection to keep competition off of the market during the term of patents that issue from the patent applications.

Given the amount of time required for the development, testing and regulatory review of new product candidates or products, patents protecting such candidates might expire before or shortly after such product candidates or products are commercialized. Napo has elected to extend the term of US 7,341,744 under 35 U.S.C. 156, and the United States Patent and Trademark Office has issued a Notice of Final Determination that the patent term extension for US 7,341,744 is 1075 days. Based upon the January 11, 2018 expiration date, the patent would be extended to June 2021, to account for regulatory delay in obtaining human marketing approval for crofelemer. The United States Patent and Trademark Office (USPTO) has not yet issued a Patent Term Extension Certificate. The USPTO issued on December 16, 2006, a notice of recalculation of the patent term adjustment for US 7,341,744 for 842 days, for an expiration date of February 5, 2019; however, the USPTO has not issued a certificate of correction to officially correct the patent term adjustment accorded to this patent. In addition, on February 20, 2017, Napo filed a Request for Reconsideration of the patent term adjustment of US 7,341,744, requesting recalculation resulting in 1032 days or, alternatively, 980 days of patent term adjustment. Napo has requested that the USPTO not issue the final Patent Term Extension certificate until final resolution of the number of days of patent term adjustment accorded to US 7,341,744. There is no guarantee that the USPTO will grant the request for reconsideration. In addition, the applicable authorities, including the USPTO and the FDA, and any equivalent regulatory authority in other

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countries, may not agree with Napo's assessment of whether such extensions are available, and may refuse to grant extensions to patents, or may grant more limited extensions than requested. If this occurs, Napo's competitors may take advantage of Napo's investment in development and trials by referencing Napo's clinical and preclinical data and launch their product earlier than might otherwise be the case.

Even where laws provide protection or Napo is able to obtain patents, costly and time-consuming litigation may be necessary to enforce and determine the scope of Napo's proprietary rights, and the outcome of such litigation would be uncertain. Moreover, any actions Napo may bring to enforce Napo's intellectual property against Napo's competitors could provoke them to bring counterclaims against Napo, and some of Napo competitors have substantially greater intellectual property portfolios than Napo has.

If Napo is unable to prevent disclosure of its trade secrets or other confidential information to third parties, Napo's competitive position may be impaired.

Napo also relies on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable or for which Napo has not filed patent applications, processes for which patents are difficult to obtain or enforce and other elements of Napo's product development processes that involve proprietary know-how, information or technology that is not covered by patents. Although Napo requires all of its employees to assign their inventions to Napo, and endeavors to execute confidentiality agreements with all Napo employees, consultants, advisors and any third parties who have access to Napo's proprietary know-how, information or technology, Napo cannot be certain that it has executed such agreements with all parties who may have helped to develop Napo's intellectual property or had access to Napo's proprietary information, or that Napo's agreements will not be breached. Napo cannot guarantee that Napo's trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to Napo's trade secrets or independently develop substantially equivalent information and techniques. If Napo is unable to prevent disclosure of Napo's intellectual property to third parties, Napo may not be able to maintain a competitive advantage in its market, which would harm Napo's business.

Any disclosure to or misappropriation by third parties of Napo's confidential proprietary information could enable competitors to quickly duplicate or surpass Napo's technological achievements, and erode Napo's competitive position in Napo's market.

Napo may be involved in lawsuits to protect or enforce any current or future patents issued to Napo, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe upon any patents that have issued or may issue to Napo, or any patents that Napo has licensed or may license. To counter infringement or unauthorized use of any patents Napo may obtain, Napo may be required to file infringement claims or request that Napo's licensor file an infringement claim, which can be expensive and time-consuming to litigate. In addition, if Napo or one of its future collaborators were to initiate legal proceedings against a third party to enforce a patent covering Napo's current product candidates, or one of Napo's future products, the defendant could counterclaim that the patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, non-enablement or lack of statutory subject matter. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant material information from the USPTO, or made a materially misleading statement, during prosecution. Third parties may also raise similar validity claims before the USPTO in post-grant proceedings such as *ex parte* reexaminations, *inter partes* review, or post-grant review, or oppositions or similar proceedings outside the United States, in parallel with litigation or even outside

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the context of litigation. The outcome following legal assertions of invalidity and unenforceability is unpredictable. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, Napo would lose at least part, and perhaps all, of any current or future patent protection on Napo's current or future products or product candidates. Such a loss of patent protection could harm Napo's business. Napo cannot be certain that there is no invalidating prior art, of which Napo and the patent examiner were unaware during prosecution. For the patents and patent applications that Napo has licensed, Napo may have limited or no right to participate in the defense of any licensed patents against challenge by a third party.

Litigation proceedings may fail and, even if successful, may result in substantial costs and distract Napo's management and other employees. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of Napo's confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be unsuccessful, it could have an adverse effect on the price of Napo's common stock. Finally, Napo may not be able to prevent, alone or with the support of Napo's licensors, misappropriation of Napo's trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the United States.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing Napo's ability to protect its products.

As is the case with other health product companies, Napo's success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the health industry involves both technological and legal complexity. Therefore, obtaining and enforcing patents is costly, time-consuming and inherently uncertain. In addition, the United States has recently enacted and implemented wide-ranging patent reform legislation. The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to Napo's ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken Napo's ability to obtain new patents or to enforce patents that Napo has licensed or that Napo might obtain in the future.

Napo may not be able to protect its intellectual property rights throughout the world, which could impair Napo's business.

Filing, prosecuting and defending patents on prescription drug products and product candidates and non-prescription products and product candidates throughout the world would be prohibitively expensive. Competitors may use Napo's technologies in jurisdictions where Napo has not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where Napo may obtain patent protection, but where patent enforcement is not as strong as that in the United States. These products may compete with Napo's products in jurisdictions where Napo does not have any issued or licensed patents and any future patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for Napo to stop the infringement of Napo's current or future patents, if any, or patents Napo has in licensed, or marketing of competing products in violation of

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Napo's proprietary rights generally. Further, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, Napo may encounter significant problems in protecting and defending Napo's intellectual property both in the United States and abroad. Proceedings to enforce Napo's future patent rights, if any, in foreign jurisdictions could result in substantial cost and divert Napo's efforts and attention from other aspects of Napo's business.

Napo's business could be harmed if Napo fails to obtain certain registered trademarks in the United States or in other countries.

During trademark registration proceedings, Napo may receive rejections of its trademark applications. If so, Napo will have an opportunity to respond, but Napo may be unable to overcome such rejections. In addition, the USPTO and comparable agencies in many foreign jurisdictions may permit third parties to oppose pending trademark applications and to seek to cancel registered trademarks. If opposition or cancellation proceedings are filed against any of Napo's trademark applications or any registered trademarks, Napo's trademarks may not survive such proceedings. Moreover, any name Napo proposes to use with Napo's prescription drug product candidates in the United States, must be approved by the FDA, regardless of whether Napo has registered or applied to register as a trademark. The FDA typically conducts a review of proposed prescription drug product names, including an evaluation of potential for confusion with other product names. If the FDA objects to any of Napo's proposed proprietary product names, Napo may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA.

Napo may be subject to claims that Napo's employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

Napo has received confidential and proprietary information from third parties. In addition, Napo employs individuals who were previously employed at other biotechnology, pharmaceutical or health companies. Napo may be subject to claims that Napo or Napo's employees, consultants or independent contractors have inadvertently or otherwise improperly used or disclosed confidential information of these third parties or Napo's employees' former employers. Litigation may be necessary to defend against any such claims. Even if Napo is successful in defending against any such claims, such litigation could result in substantial cost and be a distraction to Napo's management and employees.

Risks Related to Government Regulation of Napo's Business

Even if Napo receives any required regulatory approvals for Napo's current or future prescription drug product candidates and non-prescription products, Napo will be subject to ongoing obligations and continued regulatory review, which may result in significant additional expense.

If the FDA or any other regulatory body approves any of Napo's current or future prescription drug product candidates, or if necessary, Napo's non-prescription products, the manufacturing processes, clinical development, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product may be subject to extensive and ongoing regulatory requirements. These requirements could include, but are not limited to, submissions of efficacy and safety and other post-marketing information and reports, establishment registration, and product listing, compliance with new rules promulgated under the FSMA, as well as continued compliance with cGMP, GLP and GCP for any studies that Napo conducts post-approval. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with Napo's contract manufacturers or manufacturing processes, or failure to

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comply with regulatory requirements, are reportable events to the FDA and may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market, revised labeling, or voluntary or involuntary product recalls;
- additional clinical studies fines, warning letters or holds on studies;
- refusal by the FDA, or other regulators to approve pending applications or supplements to approved applications filed by Napo or Napo's strategic collaborators related to the unknown problems, or suspension or revocation of the problematic product's license approvals;
- product seizure or detention, or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The FDA or other regulatory agency's policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of Napo's product candidates or require certain changes to the labeling or additional clinical work concerning safety and efficacy of the product candidates. Napo cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If Napo is slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if Napo is not able to maintain regulatory compliance, Napo may lose any marketing approval that Napo may have obtained and Napo may not achieve or sustain profitability, which would harm Napo's business. In addition, failure to comply with these regulatory requirements could result in significant penalties.

In addition, from time to time, Napo may enter into consulting and other financial arrangements with physicians, who prescribe or recommend Napo's products, once approved. As a result, Napo may be subject to state, federal and foreign healthcare laws, including but not limited to anti-kickback laws. If Napo's financial relationships with physicians are found to be in violation of such laws that apply to Napo, Napo may be subject to penalties.

The issuance by the FDA of protocol concurrences for Napo's pivotal studies does not guarantee ultimate approval of Napo's NDA.

Napo intends to seek protocol concurrences from the FDA for future pivotal trials that Napo initiates. A pivotal study protocol is submitted to the FDA by a drug sponsor for purposes of obtaining FDA review of the protocol. Prior FDA review of the protocol for a pivotal study makes it more likely that the study will generate information the sponsor needs to demonstrate whether the drug is safe and effective for its intended use. It creates an expectation by the sponsor that the FDA should not later alter its perspectives on these issues unless public concerns appear that were not recognized at the time of protocol assessment. Even if the FDA issues a protocol concurrence, ultimate approval of an NDA by the FDA is not guaranteed because a final determination that the agreed-upon protocol satisfies a specific objective, such as the demonstration of efficacy, or supports an approval decision, will be based on a complete review of all the data submitted to the FDA. Even if Napo were to obtain protocol concurrence such concurrence does not guarantee that the results of the study will support a particular finding or approval of the new drug.

Any of Napo's current or future prescription drug product candidates or non-prescription products may cause or contribute to adverse medical events that Napo would be required to report to regulatory authorities and, if Napo fails to do so, Napo could be subject to sanctions that would harm Napo's business.

If Napo is successful in commercializing any of Napo's current or future prescription drug product candidates or non-prescription products, certain regulatory authorities will require that Napo report

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certain information about adverse medical events if those products may have caused or contributed to those adverse events. The timing of Napo's obligation to report would be triggered by the date Napo becomes aware of the adverse event as well as the nature of the event. Napo may fail to report adverse events Napo becomes aware of within the prescribed timeframe. Napo may also fail to appreciate that Napo has become aware of a reportable adverse event, especially if it is not reported to Napo as an adverse event or if it is an adverse event that is unexpected or removed in time from the use of Napo's products. If Napo fails to comply with Napo's reporting obligations, the regulatory authorities could take action including, but not limited to, criminal prosecution, seizure of Napo's products, facility inspections, removal of Napo's products from the market, recalls of certain lots or batches, or cause a delay in approval or clearance of future products.

Legislative or regulatory reforms make it more difficult and costly for Napo to obtain regulatory clearance or approval of any of Napo's current or future product candidates and to produce, market, and distribute Napo's products after clearance or approval is obtained.

From time to time, legislation is drafted and introduced in the U.S. Congress or other jurisdictions in which Napo intends to operate that could significantly change the statutory provisions governing the testing, regulatory clearance or approval, manufacture, and marketing of regulated products. In addition, the FDA's regulations and guidance are often revised or reinterpreted by the FDA and such other regulators in ways that may significantly affect Napo's business and Napo's products and product candidates. Similar changes in laws or regulations can occur in other countries. Any new regulations or revisions or reinterpretations of existing regulations in the United States or in other countries may impose additional costs or lengthen review times of any of Napo's current or future products and product candidates. Napo cannot determine what effect changes in regulations, statutes, legal interpretation or policies, when and if promulgated, enacted or adopted may have on Napo's business in the future. Such changes could, among other things, require:

changes to manufacturing methods;

additional clinical trials or testing;

new requirements related to approval to enter the market;

recall, replacement, or discontinuance of certain products; and

additional record keeping or the development of certain regulatory required hazard identification plans.

Each of these would likely entail substantial time and cost and could harm Napo's financial results. In addition, delays in receipt of or failure to receive regulatory clearances or approvals for any future products would harm Napo's business, financial condition, and results of operations.

Risks Related to the Combined Company if the Merger is Completed

The failure to integrate successfully the businesses of Jaguar and Napo in the expected timeframe would adversely affect the combined company's future results following the completion of the merger.

The success of the merger will depend, in large part, on the ability of the combined company following the completion of the merger to realize the anticipated benefits from combining the businesses of Jaguar and Napo. To realize these anticipated benefits, the combined company must successfully integrate the businesses of Jaguar and Napo. This integration will be complex and time-consuming.

The failure to integrate successfully and to manage successfully the challenges presented by the integration process may result in the combined company's failure to achieve some or all of the anticipated benefits of the merger.

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Potential difficulties that may be encountered in the integration process include the following:

- lost sales and customers as a result of customers of either of the two companies deciding not to do business with the combined company;
- complexities associated with managing the larger, more complex, combined business;
- integrating personnel from the two companies;
- potential unknown liabilities and unforeseen expenses, delays or regulatory conditions associated with the merger; and
- performance shortfalls at one or both of the companies as a result of the diversion of management's attention caused by completing the merger and integrating the companies' operations.

The combined company's future results will suffer if the combined company does not effectively manage its expanded operations following the merger.

Following the merger, the size of the combined company's business will be significantly larger than the current businesses of Jaguar and Napo. The combined company's future success depends, in part, upon its ability to manage this expanded business, which will pose substantial challenges for the combined company's management, including challenges related to the management and monitoring of new operations and associated increased costs and complexity. Neither Jaguar nor Napo can assure you that the combined company will be successful or that the combined company will realize the expected operating efficiencies, annual net operating synergies, revenue enhancements and other benefits currently anticipated to result from the merger.

The loss of key personnel could have a material adverse effect on the combined company's business, financial condition or results of operations.

The success of the merger will depend in part on the combined company's ability to retain key Jaguar and Napo employees who continue employment with the combined company after the merger is completed. It is possible that these employees might decide not to remain with the combined company after the merger is completed. If these key employees terminate their employment, the combined company's business activities might be adversely affected, management's attention might be diverted from integrating Jaguar and Napo to recruiting suitable replacements and the combined company's business, financial condition or results of operations could be adversely affected. In addition, the combined company might not be able to locate suitable replacements for any such key employees who leave the combined company or offer employment to potential replacements on reasonable terms.

The combined company will incur significant transaction and merger-related costs in connection with the merger.

Jaguar and Napo expect to incur significant costs associated with completing the merger and combining the operations of the two companies. Although the exact amount of these costs is not yet known, Jaguar and Napo estimate that these costs will be approximately $3.3 million in the aggregate. In addition, there may be unanticipated costs associated with the integration. Although Jaguar and Napo expect that the elimination of duplicative costs and other efficiencies may offset incremental transaction and merger-related costs over time, these benefits may not be achieved in the near term or at all.

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The combined company will record goodwill that could become impaired and adversely affect the combined company's operating results.

The merger will be accounted for as an acquisition by Jaguar in accordance with accounting principles generally accepted in the United States. Under the acquisition method of accounting, the assets and liabilities of Napo will be recorded, as of completion, at their respective fair values and added to those of Jaguar. The reported financial condition and results of operations of Jaguar issued after completion of the merger will reflect Napo balances and results after completion of the merger, but will not be restated retroactively to reflect the historical financial position or results of operations of Napo for periods prior to the merger. Following completion of the merger, the earnings of the combined company will reflect acquisition accounting adjustments. See "Unaudited Pro Forma Combined Condensed Financial Statements" beginning on page 316.

Under the acquisition method of accounting, the total purchase price will be allocated to Napo's tangible assets and liabilities and identifiable intangible assets based on their fair values as of the date of completion of the merger. The excess of the purchase price over those fair values will be recorded as goodwill. Jaguar and Napo expect that the merger will result in the creation of goodwill based upon the application of the acquisition method of accounting. According to the unaudited pro forma condensed combined balance sheet as of March 31, 2017, which is located elsewhere in this joint proxy statement/prospectus, the proposed merger would result in goodwill equal to $29,251,549. To the extent the value of goodwill or intangibles becomes impaired, the combined company may be required to incur material charges relating to such impairment. Such a potential impairment charge could have a material impact on the combined company's operating results.

Jaguar's ability to utilize net operating loss carryforwards and certain other tax attributes may be limited.

Federal and state income tax laws impose restrictions on the utilization of net operating loss (sometimes referred to as NOL) and tax credit carryforwards in the event that an "ownership change" occurs for tax purposes, as defined by Section 382 of the Code. In general, an ownership change occurs when stockholders owning 5% or more of a "loss corporation" (a corporation entitled to use NOL or other loss carryovers) have increased their ownership of stock in such corporation by more than 50 percentage points during any three-year period. The annual base limitation under Section 382 of the Code is calculated by multiplying the loss corporation's value at the time of the ownership change by the greater of the long-term tax-exempt rate determined by the IRS in the month of the ownership change or the two preceding months.

As of December 31, 2016, Jaguar and Napo had $24.5 million and $85.4 million, respectively, of NOLs for federal income tax purposes that may be currently limited in their annual use. As a result of the merger, it is possible that either or both Jaguar and Napo will be deemed to have undergone an "ownership change" for purposes of Section 382 of the Code. Accordingly, the combined company's ability to utilize Jaguar's and Napo's net operating loss carryforwards may be substantially limited. These limitations could in turn result in increased future tax payments for the combined company, which could have a material adverse effect on the business, financial condition or results of operations of the combined company.

The merger may not be accretive, and may be dilutive, to Jaguar's earnings per share, which may negatively affect the market price of Jaguar common stock.

Although the merger is expected to be accretive to earnings per share, the merger may not be accretive, and may be dilutive, to Jaguar's earnings per share. The expectation that the merger will be accretive is based on preliminary estimates that may materially change. In addition, future events and

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conditions could decrease or delay any accretion, result in dilution or cause greater dilution than may be expected, including:

- adverse changes in market conditions;
- production levels;
- operating results;
- competitive conditions;
- laws and regulations affecting the animal health industry;
- capital expenditure obligations; and
- general economic conditions.

Any dilution of, or decrease or delay of any accretion to, Jaguar's earnings per share could cause the price of Jaguar's common stock to decline.

Business issues currently faced by one company may be imputed to the operations of the other company or the combined company.

To the extent that either Jaguar or Napo currently has or is perceived by customers to have operational challenges, those challenges may raise concerns by existing customers of the other company following the merger which may limit or impede Jaguar's future ability to maintain relationships with those customers.

Resales of shares of Jaguar common stock following the merger and additional obligations to issue shares of Jaguar common stock may cause the market price of Jaguar common stock to decrease.

As of June 30, 2017, Jaguar had 17,382,501 shares of common stock issued and outstanding and approximately 11,027,965 shares of common stock subject to outstanding options, warrants and other rights to purchase or acquire its shares. Jaguar currently estimates that it will issue up to an aggregate of approximately 69,299,346 shares of Jaguar common stock and non-voting common stock upon the closing of the merger and the related Napo debt settlement, on a fully diluted basis assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more. Of these shares, (x) up to approximately 19,700,625 shares of Jaguar common stock and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units (sometimes referred to herein collectively as the Merger Shares), will be issuable upon the vesting of the contingent rights, which shares are registered for resale pursuant to this joint proxy statement/prospectus.

The issuance of and subsequent resale of these new shares of Jaguar common stock could have the effect of depressing the market price for shares of Jaguar common stock. In addition, the issuance of Jaguar common stock upon exercise of outstanding Jaguar options and warrants could also have the effect of depressing the market price for shares of Jaguar common stock.

The combined company will assume Napo's obligations under the Napo/Salix Settlement Agreement, including the payment of fees to Salix in connection with the licensing of certain Napo assets and the sale or transfer of Napo assets in any subsequent transaction.

Pursuant to the settlement, termination, asset transfer and transition agreement, or the Napo/Salix Settlement Agreement, between Napo and Salix Pharmaceuticals, Inc., or Salix, Jaguar will become

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subject to Napo's obligations under the Napo/Salix Settlement Agreement upon consummation of the merger, including the obligation to make payments to Salix consisting of a percentage of any consideration (i) received by the combined company or any of its affiliates from licensing certain assets specified in the Napo/Salix Settlement Agreement and/or (ii) received by the combined company in connection with the merger, consolidation, sale or similar transaction involving the combined company that is attributable to Napo and its affiliates. These payments will reduce any future revenues realized by the combined company from licensing or selling Napo's assets.

In addition, the combined company will not be able to incur any secured indebtedness from any creditor without entering into an intercreditor agreement with such creditor and Salix for purposes of protecting the relative priority of Salix's rights to payment and collection of amounts payable to Salix as described above. This restriction may hinder the combined company's ability to obtain, or increase the costs of obtaining, secured financing in the future.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

The statements in this joint proxy statement/prospectus and the documents incorporated by reference herein that are not historical statements, including statements regarding the expected timetable for completing the merger, benefits and synergies of the merger, future opportunities for the combined company and products, future financial performance and any other statements regarding Jaguar's and Napo's future expectations, beliefs, plans, objectives, financial conditions, assumptions or future events or performance that are not historical facts, are forward-looking statements within the meaning of the federal securities laws. These statements are subject to numerous risks and uncertainties, many of which are beyond the companies' control, which could cause actual results to differ materially from the results expressed or implied by the statements. These risks and uncertainties include, but are not limited to: failure to obtain the required votes of Jaguar's or Napo's stockholders; the timing to consummate the merger; the risk that conditions to closing of the merger may not be satisfied or the closing of the merger may otherwise not occur; the risk that a regulatory approval that may be required for the merger is not obtained or is obtained subject to conditions that are not anticipated; the diversion of management time on transaction-related issues; the ultimate timing, outcome and results of integrating the operations of Jaguar and Napo; the effects of the business combination of Jaguar and Napo, including the combined company's future financial condition, results of operations, strategy and plans; expected synergies and other benefits from the merger and the ability of Jaguar to realize such synergies and other benefits; expectations regarding regulatory approval of the transaction; the possibility that Jaguar and Napo may not be able to maintain relationships with their employees, suppliers or customers as a result of the uncertainty surrounding the merger; direct or indirect effects on the combined company's business, financial condition or liquidity resulting from a change in its credit rating or the credit ratings of its counterparties or competitors; actions by third parties, including governmental agencies; compliance with laws related to income taxes and assumptions regarding the generation of future taxable income; maintaining a highly skilled workforce; and integration of acquired businesses and operations of joint ventures.

Any forward-looking statements should be considered in light of such important factors. Jaguar and Napo undertake no obligation to revise or update publicly any forward-looking statements for any reason. Readers are cautioned not to place undue reliance on any forward-looking statement, which speaks only as of the date on which such statement is made or in the case of documents incorporated by reference, as of the date of the document incorporated by reference.

All subsequent written and oral forward-looking statements concerning the merger or other matters addressed in this joint proxy statement/prospectus and attributable to Jaguar, Napo or any person acting on their behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this joint proxy statement/prospectus.

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JAGUAR BUSINESS

Overview

Jaguar is an animal health company focused on developing and commercializing first-in-class gastrointestinal products for companion and production animals, foals, and high value horses. Jaguar was founded in San Francisco, California as a Delaware corporation on June 6, 2013. Napo formed Jaguar to develop and commercialize animal health products. Effective as of December 31, 2013, Jaguar was a wholly-owned subsidiary of Napo, and until May 13, 2015, Jaguar was a majority-owned subsidiary of Napo. Since inception, Jaguar has been primarily focused on designing and conducting studies of Canalevia to treat various types of diarrhea in dogs and of Neonorm to help retain fluid in calves and to function as an anti-diarrheal in foals. A portion of Jaguar's activities has also been focused on other efforts associated with being a recently formed company, including securing necessary intellectual property, recruiting management and key employees, and financing activities.

Canalevia is Jaguar's lead prescription drug product candidate. Jaguar achieved statistically significant results in a multicenter canine proof-of-concept study completed in February 2015, supporting the conclusion that Canalevia treatment is superior to placebo in alleviating clinical signs associated with secretory, or watery, diarrhea in dogs. As Jaguar announced in December 2015, the pivotal clinical field study to evaluate the safety and effectiveness of Canalevia for acute diarrhea in dogs is underway. Two-hundred dogs were enrolled in the Canalevia pivotal study, which completed enrollment in January 2017. Jaguar has received Minor Use in a Minor Species (MUMS) designation for Canalevia for Chemotherapy-Induced Diarrhea (CID) in dogs, and Jaguar is pursuing MUMS designation for Canalevia for the indication of exercise-induced diarrhea (EID) in dogs.

Canalevia is a canine-specific formulation of crofelemer, an active pharmaceutical ingredient isolated and purified from the *Croton lechleri* tree, which is sustainably harvested. A human-specific formulation of crofelemer, Mytesi (formerly known as Fulyzaq), was approved by the FDA in 2012 for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy. Members of Jaguar's management team developed crofelemer while at Napo. Canalevia utilizes the same mechanism of action as Mytesi, as do Neonorm Foal and Neonorm Calf Jaguar's lead non-prescription products. Each of these products normalizes ion and water flow into the intestinal lumen. Because this is a physiological pathway generally present in mammals, Jaguar has validated its low risk strategy of extending the clinical success in humans to preweaned dairy calves, foals, piglets, and dogs; and Jaguar believes these clinical benefits will continue to be confirmed in other mammalian species.

Neonorm is a standardized botanical extract derived from the *Croton lechleri* tree. Jaguar launched Neonorm Calf in the United States at the end of 2014 for preweaned dairy calves. The reception among users of Neonorm Calf and Neonorm Foal, the anti-diarrheal product Jaguar launched for newborn horses in early 2016 has been quite positive. The clinically-proven performance of Neonorm Foal, in combination with Jaguar's heightened understanding of market needs within the global equine space, is driving Jaguar's increased focus on developing a full suite of equine products to support and improve gastrointestinal health in foals and adult horses. Gastrointestinal conditions such as acute diarrhea, ulcers and diarrhea associated with acute colitis can be extremely debilitating for horses, and present a significant economic and emotional burden for veterinarians and owners around the world. Equilevia (formerly referred to as SB-300) is Jaguar's prescription drug product candidate for treatment of gastrointestinal ulcers in horses. Equilevia is a pharmaceutical formulation of a standardized botanical extract.

As Jaguar announced on March 28, 2017, it has entered an exclusive, 60-day evaluation period, commencing April 3, 2017, with a leading multinational animal health pharmaceutical firm regarding Equilevia. Jaguar completed a dose determination study of the target commercial paste formulation of Equilevia in the fourth quarter of last year. All data from the dose determination study will remain

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confidential during the 60-day evaluation period. The partnering strategy of both Jaguar and Napo is focused on bringing novel gastrointestinal medicines from the two company's extremely broad pipelines to market in a productive and efficient manner, and Jaguar believes entering a possible collaboration with a leading animal health company focused on equine athletes would be an important component of this strategy.

As Jaguar announced on January 31, 2017, Jaguar and Elanco US Inc., a subsidiary of Eli Lilly and Company, have signed an agreement to license, develop, co-promote and commercialize Canalevia for treatment of acute diarrhea in dogs. The agreement grants Elanco exclusive global rights to Canalevia for use in companion animals. Jaguar and Elanco will collaborate on the global development of the product and on its commercialization in the US. Under the terms of the agreement, Jaguar has retained the commercial responsibility for the CID indication of Canalevia in dogs. Jaguar plans to market Canalevia for CID in 2017, if approved, and for acute diarrhea in early 2018, if approved, through Jaguar's focused commercial efforts and to complement its relationships with distribution partners.

As Jaguar announced in December 2016, Jaguar has signed a distribution agreement with Henry Schein, Inc., the world's largest provider of health care products and services to office-based dental, animal health and medical practitioners, for exclusive distribution of Neonorm Foal product to all segments of the U.S. equine market. Henry Schein's animal health business, Dublin, Ohio-based Henry Schein Animal Health, employs approximately 900 team members and had 2015 net sales of $2.9 billion. The agreement became effective on December 9, 2016, and, subject to provisions specified in the agreement, shall continue in force for an initial period of one year. Thereafter, unless either party notifies the other of its intent not to renew the term of the agreement at least 30 days prior to the end of the then current term, the term shall be automatically renewed upon expiration for successive renewal terms of one year.

In July 2016 Jaguar released data from two China-based studies sponsored by Fresno, California-based Integrated Animal Nutrition and Health Inc. showing remarkable resolution of diarrhea and cure of piglets afflicted with diarrhea following treatment with a *Croton lechleri* botanical extract administered in water. As Jaguar announced in September 2016, Jaguar has signed an exclusive supply and distribution agreement for this botanical extract with Integrated Animal Nutrition and Health Inc. for dairy cattle and pigs in the Chinese marketplace. According to Index Muni, swine production is projected to reach 672.5 million head in 2017 in China, where pork is still the main protein source for many consumers. According to New Zealand-based NZX Agri, in 2017 there will be 7 million cows "in milk" (lactating cows) in China. With the world's largest population, China has been experiencing an increase in demand for dairy products as a result of sharply increasing income levels, fast-changing food habits, the desire of parents to feed their babies high-protein formula, and the loosening in 2015 of China's longstanding one-child policy, among other factors. Integrated Animal Nutrition and Health, Inc. has minimum purchase requirements of the botanical extract to maintain their exclusivity.

As Jaguar announced on February 2, 2017, Jaguar has begun entry into the organic market with Neonorm Calf, following listing of Neonorm Calf with an organization that evaluates livestock products in accordance with the U.S. Department of Agriculture (USDA) National Organic Standards on behalf of specified producers in New York state. Additionally, Jaguar is applying to have Neonorm Calf listed by the Organic Materials Review Institute (OMRI). OMRI is an international nonprofit organization that determines which input products are allowed for use in organic production and processing. OMRI Listed® products are allowed for use in certified organic operations under the USDA National Organic Program. According to the Organic Trade Association's (OTA) 2016 Organic Industry Survey, the U.S. organic industry posted new records in 2015, with total organic product sales hitting a new benchmark of $43.3 billion, up 11% from the previous year's record level and outpacing the overall food market's growth rate of 3%. According to OTA, dairy, the second biggest organic food category, accounted for $6.0 billion in sales, an increase of over 10%, and dairy accounts for 15% of total organic food sales.

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Organic livestock production plays a vital role in support of a sustainable and safe farm and food system, both in the U.S. and internationally. According to a report published by Allied Market Research, the global market for organic dairy food and drinks organic milk, yogurt, cheese, and others is expected to grow at a compound annual growth rate of 14.25% from 2016 to reach $36.7 billion by 2022 from $14.5 billion in 2015. Jaguar believes Neonorm Calf will qualify as allowable for use on certified organic dairies throughout the U.S., and Jaguar is currently working to obtain additional required listings.

Jaguar has an exclusive worldwide license to Napo's intellectual property rights and technology related to Jaguar products and product candidates, including rights to Napo's library of over 2,300 medicinal plants, for all veterinary treatment uses and indications for all species of animals. This includes rights to Neonorm, Canalevia, and other distinct prescription drug product candidates in Jaguar's pipeline along with the corresponding existing preclinical and clinical data packages. Jaguar also recently expanded its intellectual property portfolio to include combinations of Jaguar's proprietary anti-secretory product lines, Canalevia and Neonorm, with the non-absorbed antibiotic, rifaximin, for gastrointestinal indications in all animals.

Jaguar's management team has significant experience in gastrointestinal and animal health product development. This experience includes the development of crofelemer for human use, from discovery and preclinical and clinical toxicity studies, including the existing animal studies to be used for Canalevia regulatory approvals, through human clinical development. Jaguar's team also includes individuals who have prior animal health experience at major pharmaceutical companies.

Product Pipeline

Jaguar is developing a pipeline of prescription drug product candidates and non-prescription (non-drug) products to address unmet needs in animal health. Jaguar's pipeline currently includes prescription drug product candidates for nine indications across multiple species, and non-prescription products targeting seven species.

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Prescription Drug Product Candidates

Product Candidates	Species	Indication	Recent Developments	Anticipated Near-Term Milestones
Canalevia	Dogs	CID		
			Completed safety study with commercial formulation in June 2015	Initiate pilot study for TKI associated diarrhea management
	Dogs	Acute diarrhea		Commercial launch in 2017
			Concurred protocol	Pivotal field trial completes enrollment
			Initiated pivotal field trial to evaluate safety and effectiveness	File all major sections of NADA in mid-2017
			Entered into License, Development, Co-Promotion and Commercialization Agreement with Elanco in January 2017	Commercial launch in early 2018
				Development, co-promote and distribution partner
Species-specific formulations of crofelemer	Horses	Diarrhea associated with acute colitis		Initiate development of second generation chew formulation for chronic administration
			Completed pilot safety study in December 2015	Seek MUMS designation and product development 2017
Equilevia	Horses	Ulcers		
			Proof-of-concept safety and effectiveness results in January 2016	Product development meeting with FDA in first half of 2017
			Product development meeting with FDA in first half 2016	Minimum dose results, commercial dose selection, and commence pivotal field trial
			Initiated dose confirmation study	
	Cats	Acute diarrhea	Positive racing results	

			INAD opened in 2014	Initiate safety and proof-of-concept
Virend (topical)	Cats	Herpes virus	Entered into License, Development, Co-Promotion and Commercialization Agreement with Elanco in January 2017	
Species-specific formulations of NP-500	Dogs	Obesity-related metabolic dysfunction	INAD opened in 2014	Initiate safety and proof-of-concept
	Horses	Metabolic syndrome	INAD opened in 2014	
	Cats	Type II diabetes	INAD opened in 2014	
			INAD opened in 2014	

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Non-Prescription Products

Products	Species	Use	Recent Developments	Anticipated Near-Term Milestones
Neonorm Calf	Dairy & beef calves	Helps proactively retain fluids in calves aiding the animals in avoiding debilitating, dangerous levels of dehydration	Field study supports beneficial effect on prewean weight gain	Launch second generation formulation for administration in liquid, prophylaxis
			Positive prophylactic results	Commercial launch in South America
			Distribution deal China	Business development activities
Species-specific formulations of Neonorm	Horse foals	Anti-diarrheal for newborn horses	Completed proof-of-concept study in November 2015	Evaluation of Neonorm Horse product
			Soft-launched product in December 2015	
			Commercial launch with exclusive Schein distribution deal at AAEP, 2016	
	Piglets	Normalize fecal formation in piglets	Positive preliminary topline results of two studies by Integrated Animal Nutrition and Health Inc. to evaluate the safety and effectiveness of Neonorm in piglets	Expansion of distribution in China
	Other farm/production animals	Supports gut health normalizing fecal formation	Selected clinical research	Initiate proof-of-concept studies and partnering discussions, multiple species; multiple geographies

Canalevia is Jaguar's lead prescription drug product candidate, intended for the treatment of various forms of diarrhea in dogs. Equilevia is Jaguar's prescription drug product candidate for the treatment of gastrointestinal ulcers in horses. Canalevia and Equilevia contain ingredients isolated and purified from the *Croton lechleri* tree, which is sustainably harvested. Neonorm Calf and Neonorm Foal are Jaguar's lead non-prescription products. Neonorm is a standardized botanical extract derived from the *Croton lechleri* tree, which is also provided as a botanical extract for piglets and dairy calves in China under an exclusive distribution agreement. Canalevia and Neonorm are distinct products that act at the same last step in a physiological pathway generally present in mammals.

Jaguar is developing Canalevia as a prescription drug product and Neonorm as a non-prescription product due to differences between the companion, horse and production animal markets. Owners of companion animals and equine athletes generally visit veterinarians, who prescribe a product to treat a disease or condition. Jaguar believes the ability to make a disease treatment claim is important in this market, and such a claim is only possible with FDA approval as a prescription product. In contrast, dairy farmers and other production animal owners generally make purchasing decisions based on a product's ability to demonstrate an economic benefit from health endpoints, such as weight gain.

For Jaguar's prescription product line, Jaguar is seeking protocol concurrences with the FDA where appropriate. A protocol concurrence in animal drug development means that the FDA agrees that the design and analyses proposed in a protocol are acceptable to support regulatory approval of the product candidate with respect to effectiveness of the indication studied and will not change its view of these matters, unless public or animal health concerns arise that were not recognized at the time of concurrence or Jaguar changes the protocol. Jaguar plans to seek concurrence on all major regulatory trials.

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Jaguar has licensed intellectual property from Napo to develop prescription drug product candidates for diabetes and metabolic syndrome for dogs, cats and horses, as well as a topical herpes product for cats. As with Jaguar's lead prescription drug product candidate, these products were tested in animals for safety to support their development for use in humans. Jaguar recently expanded its gastrointestinal product line to include combinations of its proprietary anti-secretory products derived from *Croton lechleri* with the non-absorbed antibiotic, rifaximin, a human approved product, for gastrointestinal indications in all animals. Jaguar is leveraging the data and knowledge gained during the development of human therapeutics into veterinary applications.

Business Strategy

Jaguar's goal is to become a leading animal health company with first-in-class products that address unmet medical needs in both the companion and production animal markets, and the equine market. To accomplish this goal, Jaguar plans to:

Leverage its significant gastrointestinal knowledge, experience and intellectual property portfolio to develop a line of *Croton lechleri*-derived products for production and companion animals, and horses.

Jaguar's management team collectively has more than 100 years of experience in the development of gastrointestinal prescription drug and non-prescription products. This experience covers all aspects of product development, including discovery, preclinical and clinical development and regulatory strategy.

In addition to Jaguar's near-term development efforts advancing Canalevia for dogs, Neonorm Calf for preweaned dairy calves, and Neonorm Foal for young horses, Jaguar is developing formulations of Canalevia and Neonorm to address the unmet medical need for the treatment of acute diarrhea, to improve gut health, to help avoid debilitating, dangerous levels of dehydration, and to normalize fecal formation across multiple animal species and market channels. The development of a full suite of products to support and improve gastrointestinal health in adult horses is one of Jaguar's core focus areas. Gastrointestinal conditions such as acute diarrhea, ulcers and diarrhea associated with acute colitis can be extremely debilitating for horses, and present a significant economic and emotional burden for veterinarians and horse owners around the world. Jaguar's products are designed with a thorough understanding of not only species-specific health issues, but also market practices, the economics of current treatment strategies, competitive dynamics, government initiatives such as concern for extensive antibiotic usage, and effective channels for new product introductions. Many of Jaguar's products are being formulated into separate and distinct gastrointestinal products accounting for multiple specific species, markets and regulatory dynamics.

Establish commercial capabilities, including third-party sales and distribution networks and Jaguar's own targeted commercial efforts, through the launch of Neonorm Calf and Neonorm Foal.

In 2014 Jaguar launched Neonorm in the United States under the brand name Neonorm Calf, and in December 2015 Jaguar conducted the soft launch of Neonorm Foal. Jaguar intends to establish a focused direct commercial effort, initially for the production animal markets. Jaguar will direct its commercial efforts on educational activities and outreach to key opinion leaders and decision makers at targeted regional and global accounts and also plans to continue to partner with leading distributors to commercialize Jaguar's products. Jaguar expects that its current and future distribution partners will have the presence, name recognition, reputation and reach in the veterinary markets and in both key urban and rural centers, as appropriate. Jaguar believes this overall approach is scalable and transferable as it expands its commercialization efforts to companion animals, as well as when it expands internationally.

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Launch Canalevia and Jaguar's other product candidates for companion animals, if approved, leveraging the commercial capabilities and brand awareness Jaguar is currently building.

Jaguar has nine active INADs filed with the FDA and intends to develop species-specific formulations of Neonorm in six additional target species, formulations of Equilevia in horses, and Canalevia for cats and dogs, and potentially for diarrhea associated with acute colitis in horses.

Expand to international markets.

Jaguar intends to leverage its proprietary product development in the United States to international markets, with meaningful partnerships to address international requirements for product development, registration, and access to commercialization in relevant markets for each of its prescription and non-prescription products. As an example, in February 2015 Jaguar signed a distribution agreement with Biogenesis Bagó, a large veterinary biotechnology company in Latin America, a region that contained approximately 401 million dairy and beef cattle in 2009 and produces approximately 11% of the world's milk supply. The distribution agreement provides Biogenesis Bagó with exclusive distribution rights for Neonorm Calf in Argentina, Brazil, Paraguay, Uruguay, and Bolivia.

Additionally, in September 2016, Jaguar entered an exclusive supply and distribution agreement for *Croton lechleri* botanical extract with Fresno, California-based Integrated Animal Nutrition and Health Inc. for dairy cattle and pigs in the Chinese marketplace. The agreement was executed following the positive results, which Jaguar announced in July 2016, of two studies to evaluate the safety and effectiveness of the botanical extract in piglets. The terms of the agreement specify annual minimum purchase amounts that are required to maintain exclusivity, and state that Integrated Animal Nutrition and Health Inc. is responsible for all activities and costs to obtain all required product registrations, marketing authorizations, and customs clearances for the Chinese market.

According to Index Muni, swine production is projected to reach 672.5 million head in 2017 in China, where pork is still the main protein source for many consumers. According to New Zealand-based NZX Agri, in 2017 there will be 7 million cows "in milk" (lactating cows) in China. With the world's largest population, China has been experiencing an increase in demand for dairy products as a result of sharply increasing income levels, fast-changing food habits, the desire of parents to feed their babies high-protein formula, and the loosening in 2015 of China's longstanding one-child policy, among other factors.

As Jaguar works to expand its commercialization efforts, Jaguar intends to seek out additional opportunities to enter key international markets. Certain markets, such as high performance horses, have strong international synergies benefiting market awareness and demand. Jaguar may also enter into partnerships that include payment of upfront licensing fees for its products and product candidates for markets outside the United States where appropriate.

Identify market needs that can be readily accessed and develop species-specific products by leveraging Jaguar's broad intellectual property portfolio, deep pipeline and extensive botanical library.

In addition to Jaguar's anti-secretory gastrointestinal product development efforts, Jaguar has expanded the depth of its gastrointestinal pipeline product candidates to include combinations of its proprietary anti-secretory products derived from *Croton lechleri* with the non-absorbed antibiotic, rifaximin, a human approved product, for gastrointestinal indications in all animals. Jaguar is also developing products such as Virend for feline herpes and NP-500 for Type II diabetes and metabolic syndrome. Both of these product candidates have been through Phase 2 human clinical testing. In addition, Jaguar has exclusive worldwide rights to Napo's library of over 2,300 medicinal plants for veterinary use in all species. Jaguar believes it has the product candidates and expertise to address

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many unmet animal health needs for both companion and production animals in numerous markets and geographies.

Products in Development

Market Background Acute Diarrhea

Jaguar believes there is an unmet medical need for the treatment of acute diarrhea. The devastating dehydration that often occurs as a result of acute diarrhea in animals, including dogs, horses and preweaned dairy calves, can manifest quickly, have long-term health implications and result in death. Other than the FDA-approved human formulation of crofelemer, there are currently no approved anti-secretory agents Jaguar is aware of that directly address the water loss associated with acute diarrhea. Current treatments for acute diarrhea include oral rehydration solution, or ORS, anti-motility agents, absorbents and antibiotics. However, each of these approaches has known limitations. While ORS replaces the water loss associated with diarrhea, it can often extend the duration and severity of diarrhea. Anti-motility agents work by the mechanism of constipation, or temporarily paralyzing normal intestinal contractions, or peristaltic activity. These agents are contraindicated for chronic use and are therefore inappropriate for certain conditions, such as chronic CID. Anti-motility agents can also cause pain, cramping, and rebound diarrhea. Absorbents simply attempt to absorb the toxin in the gut, often causing additional pain and cramping, and do not directly address the water loss. Antibiotics attempt to treat the infectious agent releasing the toxin, but do not directly address water loss and carry a risk of altering gut flora, which alteration itself can cause diarrhea. Systemic antibiotic usage has also come under increased scrutiny by the FDA due to problems associated with antibiotic resistance.

Jaguar believes that an ideal treatment for acute diarrhea would directly address water loss without causing constipation, affecting normal peristaltic activity or altering normal body absorption of other drugs or normal physiological function of the gut. Jaguar believes addressing water loss associated with acute diarrhea will improve the quality of life of dogs and provide attendant benefits to the dog owner, improve the health and productivity of dairy cattle and provide similar health and economic benefits in multiple other species. Jaguar's gastrointestinal products and product candidates act by normalizing the flow of ions and water in the intestinal lumen, the dysregulation of which is the last step common to the manifestation of acute diarrhea. As a result, Jaguar believes that its products and product candidates may be effective in addressing acute diarrhea, regardless of cause. In addition, the channels that regulate this ion and water flow, including channels known as CFTR and CaCC (the sites of action of Jaguar's gastrointestinal products), are generally present in mammals. Jaguar therefore expects that the clinical benefit shown in humans, preweaned dairy calves, foals, and dogs will be confirmed in multiple other species, including cats and adult horses. Accordingly, Jaguar believes it can bring to market multiple products among multiple species that are first-in-class and effective in preventing the debilitating and devastating ramifications of acute diarrhea in animals.

The following diagram illustrates the mechanism of action of Jaguar's gastrointestinal products, which normalize chloride and water flow and transit time of fluids within the intestinal lumen.

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Canalevia Chemotherapy-Induced Diarrhea (CID) in Dogs

Overview

Canalevia is a three-day, twice-daily formulation of crofelemer that Jaguar is developing for the treatment of CID in dogs. Canalevia is enteric-coated for targeted release of crofelemer, the active pharmaceutical ingredient, or API, in Canalevia, in the intestine. Jaguar has received MUMS designation for Canalevia for the treatment of CID in dogs, which provides an opportunity to shorten the timeframe to commercialization. In June 2015 Jaguar completed a multi-site pilot safety study involving the anticipated commercial formulation of Canalevia for CID. Jaguar has completed submission of all required major technical sections for the NADA for CID to the FDA for phased review. Jaguar expects to receive FDA acknowledgment of the completion of all required technical sections in support of conditional approval of Canalevia in 2017 for CID in dogs. Under MUMS designation, Jaguar would be required to initiate a pivotal study in the five years following conditional approval to generate the data required for full approval.

As Jaguar announced on January 31, 2017, Jaguar and Elanco US Inc., a subsidiary of Eli Lilly and Company, have signed an agreement to license, develop, co-promote and commercialize Canalevia, Jaguar's drug product candidate under investigation for treatment of acute and CID in dogs. The agreement grants Elanco exclusive global rights to Canalevia for use in companion animals. Jaguar and Elanco will collaborate on the global development of the product and on its commercialization in the U.S. Under the terms of the agreement, Jaguar has retained the commercial responsibility for the CID indication of Canalevia in dogs, which has received MUMS designation from the FDA and which the company expects will be the first indication available commercially in the next year. Jaguar plans to market Canalevia for the MUMS indication in 2017, if approved, and for acute diarrhea in early 2018, if approved, through Jaguar's focused commercial efforts and to complement Jaguar's relationships with distribution partners.

Market Opportunity

Jaguar believes there is a significant unmet medical need for the treatment of CID in dogs. There is currently no FDA-approved anti-secretory product that Jaguar is aware of to treat CID in dogs. Jaguar estimates that there are over 230,000 dogs receiving chemotherapy treatment for cancer each year in the United States, with over 25% suffering from CID. Severe diarrhea is a frequent side effect

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of the most commonly administered chemotherapy drugs. Similar to the effects in humans, Jaguar believes that if left untreated, CID in dogs can result in:

- fluid and electrolyte losses, which can cause dehydration, electrolyte imbalance and renal insufficiency;
- nutritional deficiencies from alteration of gastrointestinal transit and digestion; and
- increased risk of infectious complication.

Efficacy of the underlying cancer treatment may also be jeopardized if CID severity requires reductions in the absorption, frequency and/or dosage of chemotherapy. From the dog owner's perspective, there are significant practical implications of CID in dogs that may affect living arrangements, as well as the cost, time and attention required to clean and care for the dog and its surroundings on a daily basis. Veterinarians sometimes prescribe human drugs in an effort to treat CID in dogs, but do not have the benefit of clinical support with respect to efficacy or dosing. In addition, administering a potentially unpalatable human formulation is often difficult and may lead to further uncertainty of the amount actually ingested by the dog.

Jaguar's Solution

Jaguar believes that Canalevia is an ideal treatment for CID in dogs because of its demonstrated novel anti-secretory mechanism of action. Canalevia acts locally in the gut and is minimally absorbed systemically. It does not alter gastrointestinal motility, has no significant effects on normally functioning intestinal ion channels and electrolyte or fluid transport, and has no side effects different from placebo. These features are further augmented by its lack of effects on the absorption and/or metabolism of co-administered chemotherapy drugs, orally or by other routes of administration. Canalevia acts by normalizing the flow of excess ions and water in the intestinal lumen. The flow of excess ions and water into the intestinal lumen is the last step common to the manifestation of acute diarrhea. As a result, Jaguar believes Canalevia may be effective in the treatment of acute diarrhea, regardless of cause, including CID. Jaguar intends to conduct a study in tyrosine kinase inhibitor ("TKI") induced diarrhea in dogs with cancer in 2017, to assist its educational and commercial efforts in anticipation of conditional approval of Canalevia for CID.

Human formulations of crofelemer have been studied and found effective in human patients with various types of watery diarrhea, including traveler's diarrhea, HIV-related diarrhea and other acute infectious diarrheas, including cholera. Crofelemer has been clinically demonstrated to have a safety profile not different from placebo in humans and several animal species, including dogs.

Clinical Data

Canalevia is a canine-specific formulation of crofelemer. A human-specific formulation of crofelemer, Mytesi (formerly known as Fulyzaq), was approved by the FDA in 2012 for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy. A number of clinical studies of crofelemer were conducted by Napo in dogs in support of this approval that included dose toxicity studies. Safety was established by conducting a series of toxicity studies involving a total of 32 dogs six months of age and older. Dosage levels varied within and across the studies: two single dose acute toxicity studies were conducted on four dogs each; two seven-day repeat administration studies were conducted on four dogs each; one 30-day repeat administration study was conducted on four dogs; and one nine-month repeat administration study on eight dogs. The toxicology studies in dogs showed minimal to no adverse effects following dosing up to approximately 50 times the anticipated efficacious dose. The clinical studies previously conducted in dogs also included multiple dose studies. Jaguar is currently conducting safety studies in dogs as young as eight weeks of age to expand the studied dog population for safety label of Canalevia to include younger dogs.

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In multiple third-party human clinical trials involving approximately 2,400 patients, enteric-coated crofelemer showed statistically significant results relative to placebo in normalizing stool formation and improvements in other endpoints related to treating watery diarrhea. In these trials, the "p" values were statistical calculations to determine whether the effects of crofelemer were significant in comparison to placebo based on pre-specified statistical targets. Depending on the trial design, Jaguar specified that any result less than p=0.05 would be significant. In a pivotal trial in support of approval for human use, crofelemer demonstrated significant benefit in the chronic indication of diarrhea in adults with HIV/AIDS on anti-retroviral therapy, achieving highly significant results (p=0.0096) in the primary endpoint measuring frequency of diarrhea.

In addition to the pivotal trial in HIV/AIDS associated diarrhea, human clinical trials included double-blind, placebo-controlled chronic and acute studies, across different human patient populations, and included safety studies in pediatric patients as young as three months of age. For example, in a 3-day treatment study of approximately 100 adult human patients with acute watery diarrhea of multiple and/or unknown etiologies, crofelemer achieved clinical success in 79% of the patients, compared to 28% receiving placebo ($p<0.05$). Clinical success was defined as the complete cessation of diarrhea for 12 hours or two consecutive normal stools within 48 hours of first dose. Crofelemer also achieved statistical significance across each of the seven other endpoints measured in that study, including a 96% reduction in watery stools from baseline, compared to 54% for placebo ($p<0.05$) and an 89% reduction in urgency compared to 43% for placebo ($p<0.05$). Across the diseases and human patient populations studied to date with crofelemer, there have been no drug related serious adverse events or safety profile different from placebo.

In June 2015 Jaguar completed a pilot safety study involving the anticipated commercial formulation of Canalevia in dogs suffering from CID. The objective of the multi-site study was to determine the safety and tolerability of enteric-coated crofelemer tablets in dogs with CID when administered orally twice daily for six treatments at the recommended dose range of 2-4mg/kg. The eight dogs that participated in the study were enrolled based on current or historical episodes of diarrhea correlating to chemotherapy treatment. The study was a safety assessment as requested by the FDA, and diarrhea or unformed stool consistency was not an eligibility criteria. However, 25% of the dogs entered the study with unformed stools and responded during the treatment with formed or amorphous stools or no stool. None of the remaining dogs progressed to unformed stools.

Canalevia Expansion to Acute Diarrhea in Dogs

Overview

Jaguar is also developing Canalevia for acute diarrhea in dogs, regardless of cause. According to the American Veterinary Medical Association, there were approximately 70.0 million dogs in the United States in 2012. Diarrhea is one of the most common reasons for veterinary office visits for dogs and is the second most common reason for visits to the veterinary emergency room, yet to Jaguar's knowledge there are currently no FDA-approved anti-secretory agents to treat canine diarrhea. Jaguar estimates that in the United States, veterinarians see approximately 6.0 million annual cases of acute and chronic watery diarrhea in dogs, approximately two-thirds of which are acute diarrhea. Jaguar believes that Canalevia will be effective in treating acute diarrhea because it acts at the last physiological step, conserved across mammalian species, in the manifestation of acute diarrhea, regardless of cause, by normalizing ion and water flow in the intestinal lumen.

In December 2015 Jaguar initiated a pivotal field study to evaluate the safety and effectiveness of Canalevia for the treatment of acute diarrhea in dogs. In February 2015 Jaguar completed a randomized, blind, multicenter proof-of-concept study of Canalevia in dogs, with statistically significant results. Crofelemer, the API in Canalevia, demonstrated efficacy in numerous human clinical trials of acute watery diarrhea induced by various infectious pathogens, including *E. coli*, *V. cholera* and

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non-specific pathogens (*e.g.*, Traveler's). Following oral dosing for two or three days, crofelemer, together with ORS, produced significant reduction in watery diarrhea, as demonstrated by the reduction of watery stool passage as well as reduced duration of diarrhea, urgency and dehydration.

As Jaguar announced on January 31, 2017, Jaguar and Elanco US Inc., a subsidiary of Eli Lilly and Company, have signed an agreement to license, develop, co-promote, and commercialize Canalevia, Jaguar's drug product candidate under investigation for treatment of acute and CID in dogs. The agreement grants Elanco exclusive global rights to Canalevia for use in companion animals. Jaguar and Elanco will collaborate on the global development of the product and on its commercialization in the U.S. Under the terms of the agreement, Jaguar has retained the commercial responsibility for the CID indication of Canalevia in dogs, which has received MUMS designation from the FDA and which the company expects will be the first indication available commercially in the next year.

Market Opportunity

Diarrhea is one of the most common reasons for veterinary office visits for dogs and the second most common reason for visits to the veterinary emergency room, yet there are currently no FDA-approved anti-secretory agents Jaguar is aware of to treat the indication. Jaguar estimates that veterinarians see approximately six million annual cases of acute and chronic diarrhea in dogs in the United States, approximately two-thirds of which are acute diarrhea.

Veterinarians typically treat acute diarrhea in dogs with antibiotics, probiotics, dietary restrictions and products approved and formulated for humans, such as Imodium and other anti-motility agents, as well as binding agents that absorb water such as Kaopectate and Pepto-Bismol. None of these treatment options address the water loss associated with acute diarrhea. Further, because none of the human products are FDA approved for animal use, veterinarians do not have the benefit of clinical support with respect to efficacy or dosing. Moreover, administering a potentially unpalatable human formulation is often difficult and may lead to further uncertainty of the amount actually ingested by the dog.

Jaguar believes that Canalevia is an ideal treatment for acute diarrhea in dogs because of its demonstrated novel anti-secretory mechanism of action. If approved for use in acute diarrhea in dogs, Jaguar believes Canalevia will be the only FDA-approved anti-secretory agent to treat diarrhea in dogs.

Clinical Data

Overview. Canalevia demonstrated a statistically significant clinical response and resolution of diarrhea in a randomized, blind, multicenter study, which assessed the clinical efficacy in alleviating clinical signs associated with watery diarrhea in dogs. The five-month trial was completed in February 2015. This was a proof of concept study with the goal of defining endpoint assessments and statistical analyses to inform a trial design to FDA for a pivotal regulatory dog Canalevia study for the more general watery diarrhea indications.

The protocol for this study is based on Jaguar's experience and success in previous human and dairy calf studies evaluating *Croton lechleri* derivatives and their effect on acute diarrhea. Based on the results, Jaguar designed the pivotal trial to evaluate the safety and effectiveness of Canalevia for the indication of acute diarrhea in dogs. In December 2015 Jaguar initiated this pivotal trial. The prospective, blinded, randomized, placebo-controlled study is being conducted on an inpatient basis at private veterinary practices, animal shelters and animal rescues across the U.S. A single protocol is being followed at all sites, and enrolled dogs remain on-site and are individually housed for the duration of the study. The study enrolled 200 dogs exhibiting secretory, or watery, diarrhea. Participating dogs were randomized to receive either Canalevia or a placebo orally twice daily for three days. The study's primary endpoint is to demonstrate a resolution of diarrhea. The study period is divided into three 24-hour treatment periods followed by a 24-hour observation period, and fecal

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assessments are completed at least six times daily. Study completion testing includes a physical examination, clinical pathology testing and a final fecal assessment. Jaguar has completed enrollment of this study and expects top-line results in 1H, 2017. The company expects to file all major section of the NADA, including the results from this pivotal trial, by mid-2017.

Canalevia Exercise-Induced Diarrhea (EID) in Dogs

Overview

As Jaguar announced on March 14, 2017, it has submitted a formal request to the U.S. Food & Drug Administration's Center for Veterinary Medicine for a determination about whether or not Canalevia qualifies as a "minor use", per the requirements of The Minor Use and Minor Species Animal Health Act (MUMS Act), for the indication of exercise-induced diarrhea (EID) in dogs.

EID is a distinct physiological manifestation that has been recorded in dogs, humans and horses. EID may occur before, during or after sustained physical exertion. EID is a common problem among working dogs, such as sled dogs and military dogs, when subjected to periods of intense, long-duration exercise off-leash. Several mammalian species that physically train and run in competitive events can push themselves to extreme physical demands. At this highest level of physical exertion, secretory diarrhea is a common result, and the diarrhea can be debilitating enough to require medical attention and removal from competition or training. Diarrhea can have serious consequences for the canine athlete due to their high capacity for metabolic heat generation and reliance on evaporative cooling to dissipate that heat.

If Jaguar is successful in obtaining MUMS designation for Canalevia for use in dogs with EID, it is Jaguar's hope that this could lead to access to Canalevia, under conditional approval, for dogs for this indication also within a year. With conditional approval under MUMS designation for Canalevia for use in dogs with EID, Jaguar would be required to initiate a pivotal field study in the five years following such conditional approval to generate the data required for full NADA approval.

Equine Product Candidates

Jaguar is developing a full suite of products to support and improve gastrointestinal health in foals and adult horses. Gastrointestinal conditions such as acute diarrhea, ulcers and diarrhea associated with acute colitis can be extremely debilitating for horses, and present a significant economic and emotional burden for veterinarians and owners around the world.

Ulcers are lesions of the lining of the digestive tract and are very common in horses used for many competitive activities. Jaguar believes that because *Croton lechleri*-derived products have been shown to act locally in the gut and have traditional use and rodent model benefit for ulcers, Equilevia has the potential to address ulcers in horses, as well as diarrhea. EGUS results from both squamous and glandular gastric ulceration. Ulcers can negatively impact the performance of horses which are expected to perform at peak efficiency, including show horses and race horses. Jaguar believes a significant market exists for a product that treats both squamous and glandular ulcers in horses without altering stomach pH. According to a 2005 study, 54% of performance horses have both colonic and gastric ulcers and 97% of performance horses have either a gastric (87%) or a colonic (63%) ulcer. Data from the American Horse Council states that there are currently 9.2 million horses in the U.S., a population that includes 844,531 race horses, more than 2.7 million show horses, and more than 3.9 million recreational horses. Data from the Food and Agriculture Organization of the United Nations indicate that there were approximately 5.7 million horses in Europe in 2013 and nearly 60.0 million horses in 2013 worldwide. Jaguar's goal is to see Equilevia serve as an important tool in the standard of care for equine ulcers.

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In April 2016, Jaguar announced that standard drug testing in race horses having received Equilevia did not detect any substances commonly disallowed by horse racing authorities. The results of this initial study show that Equilevia may offer horse owners an additional advantage in the competition horse world, where requirements exist for animals to compete free from the effect of any drugs. Future work is being planned to confirm these results. The study also provided visual evidence suggesting that feed does not interfere with the product candidate's local availability in the gut.

In November 2016 Jaguar completed enrollment in a dose determination study of the target commercial paste formulation of Equilevia, with both a placebo control arm and a positive control comparator, Merial's GASTROGARD® product. The randomized, blinded, controlled, multisite dose determination study enrolled 121 racehorses two years of age or older. All enrolled horses were diagnosed with glandular and squamous gastric ulcers. The primary objective of the study is to select the minimally effective dose of Equilevia for the treatment of equine gastric ulcers in a future pivotal field study.

Horses on treatment with Equilevia in the dose determination study had higher average winnings as a percent of purse in races during the study treatment period compared with the period in which they raced prior to the study. Horses on placebo or on the positive control had a reduction in their average winnings as a percent of purse during the study treatment period compared with the period in which they raced prior to the study.

Additionally, horses on treatment with Equilevia had higher average total dollar winnings in races during the study period compared with the period in which they raced prior to the study. However, horses on placebo had a reduction in total earnings in races during the study period compared with the period in which they raced prior to the study, whereas horses on GASTROGARD® had essentially no change in their earnings in races compared with the period in which they raced prior to the study.

When analyzing data according to whether or not a horse finished a race in the top 3 or in the top 5, there was also an improvement seen for horses treated with Equilevia during the study treatment period compared with the period in which they raced prior to the study. Horses treated with placebo, however, had a reduction in frequency of finishing in the top 3 or in the top 5 in the study period compared with the period in which they raced prior to the study.

No statistically significant comparisons were generated for the aforementioned exploratory analyses. Racing results in horses treated with Equilevia during Jaguar's dose determination study are of interest because ulcers are a particular problem in equine athletes. This study was not powered for this type of result nor would Jaguar expect to have such a result listed in a product label.

Jaguar completed a dose determination study of the target commercial paste formulation of Equilevia in the fourth quarter of 2016. The equine veterinarians who performed the study were blinded to the treatment assignment, and Jaguar was also blinded to the data at that time. A full analysis of the study data with scoring of squamous and glandular ulcers has undergone independent, blinded review by Dr. Frank Andrews, DVM, MS, Dipl. ACVIM, Professor and Director of the Equine Health Studies Program at Louisiana State University College of Veterinary Medicine, an equine internist specializing in gastric ulcer disease.

As Jaguar announced on March 28, 2017, the third-party review Dr. Andrews conducted of the study data involved viewing gastroscopy videos for all participating horses and evaluating each horse against three separate EGUS grading scales: the McAllister scoring system (which assesses the number and severity of ulcers), the EGUS Council scoring system (which is relevant only for squamous ulcers), and a new visual analog scoring system, relevant for both squamous and glandular ulcers, developed by Dr. Andrews. This study showed consistency in the evaluation of gastric ulcers by the newly developed visual analog scoring system compared to the published McAllister and EGUS Council grading scales,

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and the visual analog scoring system could be an important tool in providing greater precision in gastric ulcers of differing tissue type, such as glandular lesions.

As Jaguar also announced on March 28, 2017, it has entered an exclusive, 60-day evaluation period, commencing April 3, 2017, with a leading multinational animal health pharmaceutical firm regarding Equilevia. All data from the dose determination study will remain confidential during the 60-day evaluation period. The partnering strategy of both Jaguar and Napo is focused on bringing novel gastrointestinal medicines from the two company's extremely broad pipelines to market in a productive and efficient manner, and Jaguar believes entering a possible collaboration with a leading animal health company focused on equine athletes would be an important component of this strategy.

In January 2016 Jaguar announced positive topline results from the proof-of-concept study Jaguar initiated in November 2015 to evaluate the safety and effectiveness of Jaguar's investigational new animal drug, Equilevia, for the treatment of EGUS in horses.

In this prospective, blinded, randomized, negative controlled study, Standardbred or Thoroughbred racehorses were randomized to one of three groups (10 horses per group) and treated for 28 days: horses in the placebo group received water-filled syringes every 6 hours; those in the TRT5 group received 5 grams of Equilevia divided into 2 doses per day; and those in the TRT40 group received 40 grams of Equilevia divided into 4 doses per day. Strict enrollment criteria required patients to have both squamous (non-glandular) and glandular gastric ulcerations. All horses were examined by gastroscopy (stomach endoscope) by blinded equine investigators on Day 0 (prior to treatment; baseline), and on Day 14 (mid-study), Day 28 (last day of treatment) and Day 35 (7 days after last treatment). Treatment-related adverse events were not observed.

With respect to glandular ulcerations, a statistically significantly greater number of horses in both the TRT40 (89%) and the TRT5 (78%) group had an improvement or a resolution of glandular ulcerations, compared with the placebo (25%) group as soon as Day 14. By Day 35, all of the Equilevia treated horses had experienced improvement or resolution, whereas 25% of horses in the placebo group still had not improved or resolved during the study.

With respect to squamous ulcerations, a non-statistically significant dose-dependent effect was observed with 40% and 33% of horses achieving an improvement or a resolution by Day 14 in the TRT40 and TRT5 groups, respectively, compared with 11% of placebo horses. By Day 35, numerically more horses in the TRT40 (60%) and TRT5 (55%) groups had achieved an improvement or a resolution compared with 33% of placebo horses.

In February 2016 Jaguar announced that further analysis of the study results indicates that Equilevia did not alter gastric pH during the trial, or for 7 days after therapy. Gastric pH during therapy was observed to be similar to baseline gastric pH at all measured study time points. Whereas other ulcer treatments (e.g. proton pump inhibitors like omeprazole) rely on a mechanism of action that blocks gastric acid secretion for the treatment and prevention of equine gastric ulcer syndrome (EGUS), Jaguar's preliminary data indicate that Equilevia may have advantages. Treatments for EGUS that do not alter gastric pH are important because maintaining low gastric pH is essential for digestion, for gut immunity and first line defense against pathogens, for the absorption of vitamins and minerals, and for potentially other downstream effects.

Equilevia may offer horse owners an additional advantage over omeprazole in the competition horse world, where the requirement exists for equine athletes to compete free from the effect of any drugs. International screening limits for horse racing state that omeprazole has a 72-hour detection time. Detection time is defined as the first observed time point at which urine and/or plasma samples collected from a horse are negative for the presence of a specified drug. Because Equilevia acts locally in the gut and is minimally absorbed, it is unlikely that use of this drug product candidate will present any issues related to detection time. Jaguar intends to demonstrate that Equilevia is not systemically

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absorbed in horses, thereby providing a treatment regimen that can continue without mandatory withdrawal prior to competition. Moreover, Jaguar also aims to demonstrate that Equilevia can be administered in the presence of feed, another constraint of omeprazole administration.

Jaguar also plans to initiate a field study for Equilevia, timed to take place during horse racing off-season, when race horses are available to participate. Following the late stage development toward anticipated FDA approval of Equilevia, Jaguar plans to focus initial promotional efforts on the segment of the equine market that is most likely to seek treatment for EGUS: owners and caregivers of high-value horses, equine athletes, and horses that are insured. According to the American Veterinary Medical Association, an estimated 9% of horse owners in the U.S. have insurance for the animals.

The U.S. patent for use of omeprazole to treat equine ulcers expired in 2015.

Until recently, treatment recommendations for equine ulcers have not differentiated between squamous and glandular disease. However, a series of recent third-party studies indicate considerably lower healing rates for glandular ulcers with standard of care (e.g. omeprazole). Subclinically, these lesions can compromise athletic performance.

Jaguar's goal is to see Equilevia serve as an important tool in the standard of care of horses with all types of ulcers. While Jaguar is initially developing Equilevia for the indication of EGUS, Jaguar plans to investigate the possible efficacy of this product candidate for treatment of colonic ulcers as a follow on indication in horses following the anticipated launch of Equilevia.

Jaguar also intends to develop a species-specific formulation of crofelemer to treat diarrhea associated with acute colitis in horses. Jaguar believes colitis affects thousands of horses in the United States each year, and in December 2015 Jaguar completed a pilot safety study in conjunction with Louisiana State University to evaluate crofelemer in adult horses, the first step in the development program for diarrhea associated with acute colitis. The study involved three healthy horses treated with three consecutive, three-day cycles of escalating dose levels (up to approximately eight times the proposed dosage in horses) of an oral crofelemer paste. Clinical observations, vital signs, biochemical changes (complete blood count, serum chemistry and urinalysis) and adverse events were evaluated for dose-limiting toxicity after each dose level. The study concluded that dose-limiting toxicities were not observed at any of the three dose levels.

Crofelemer Cats

According to the American Veterinary Medical Association, there were approximately 74.0 million cats in the United States in 2012. Jaguar estimates that veterinarians see approximately 2.9 million annual cases of acute diarrhea in cats. Veterinarians typically treat acute diarrhea in cats with the same treatments used for dogs, namely antibiotics, probiotics, dietary restrictions and products approved and formulated for humans, such as Imodium and other anti-motility agents, as well as binding agents that absorb water such as Kaopectate and Pepto-Bismol.

Jaguar is currently developing a species-specific formulation of crofelemer, Felevia, for cats. Jaguar intends to initiate safety and proof-of-concept studies in cats in 2017.

As Jaguar announced on January 31, 2017, Jaguar and Elanco US Inc., a subsidiary of Eli Lilly and Company, have signed an agreement to license, develop, co-promote, and commercialize Canalevia, Jaguar's drug product candidate under investigation for treatment of acute and CID in dogs. The agreement grants Elanco exclusive global rights to Canalevia for use in companion animals. Jaguar and Elanco will collaborate on the global development of the product and on its commercialization in the U.S.

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Neonorm Calf Helps proactively retain fluids in dairy and beef calves aiding the animals in avoiding debilitating, dangerous levels of dehydration

Overview

This formulation of Neonorm is an enteric-coated tablet designed to be orally administered to preweaned dairy and beef calves twice daily for three days.

According to the *Dairy 2007* study conducted by the USDA, almost one in four preweaned dairy heifers, or female calves, suffers from diarrhea or other digestive problems. The preweaning period is generally the first 60 days after birth. Scours, diarrhea or other digestive problems are responsible for more than half of all preweaned heifer calf deaths, and result in impaired weight gain and long-term reduction in milk production. Jaguar believes that the incidence rate of scours and its corresponding financial impact represent a health and business opportunity and that Neonorm Calf has the potential to effectively meet this need.

A challenge clinical study was completed in May 2014 by researchers from Cornell, and published in 2015 in the official journal of the American Dairy Science Association, *Journal of Dairy Science*. The results of this study suggest that Neonorm Calf can significantly increase the fecal dry matter of neonatal calves with experimentally-induced enterotoxigenic *E. coli* diarrhea, and suggest a potential benefit of Neonorm Calf in supporting weight gain in calves.

In 2014 Jaguar launched Neonorm for preweaned calves in the United States under the brand name Neonorm Calf. Jaguar does not believe that Neonorm Calf fits within the FDA's definition of an animal drug, food or feed additive. Thus, Jaguar does not believe that it is regulated by the FDA at this time. The FDA previously regulated a human-specific formulation as a dietary supplement, rather than as a drug. To support the commercial launch, Jaguar completed field studies of Neonorm Calf involving approximately 400 preweaned dairy calves in total with Cornell University and in collaboration with its distributor, Animart.

A further analysis, completed in October 2015, of the above-referenced Cornell study supports a benefit of Neonorm Calf on the optimization of the intestinal microbiome profile in preweaned dairy calves, a potential prebiotic benefit. The microbiome is a community of microorganisms that live normally in the gut and are vital to maintenance of gut health.

Jaguar is developing a second generation Neonorm Calf product formulation to be administered in liquid for total head prophylactic management of diarrhea, or scours. In January 2016 Jaguar announced the initiation of a placebo-controlled study in conjunction with researchers from Cornell to evaluate the efficacy of the prophylactic use of a second-generation formulation of Neonorm Calf administered in liquid on naturally occurring diarrhea and dehydration in preweaned dairy calves and investigate the possible prebiotic benefit of the product. This double-blinded, randomized study involved 40 Holstein bull calves affected with naturally occurring diarrhea. The study results, announced in June and September of 2016, show that calves under prophylactic administration of Neonorm Calf had significantly lower water content in fecal samples at multiple measurement points, lower incidence of diarrhea, and had fewer fluid therapy interventions. A paper on this study, titled "Prophylactic use of a standardized botanical extract for the prevention of naturally occurring diarrhea in newborn Holstein calves", was published in the official journal of the American Dairy Science Association, *Journal of Dairy Science* a leading peer-reviewed general dairy research journal.

Scours Market Opportunity

Scours refers to watery diarrhea in production animals, including dairy calves, which results from infectious agents that cause the secretion of ions and water into the intestinal lumen. Animals with scours may experience severe dehydration and electrolyte imbalance, which can lead to renal insufficiency, nutritional deficiencies, lower production in dairy cattle and even death. Current therapy

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includes fluid and electrolyte replacement, continuous milk feeding, antibiotics (for calves with systemic involvement (*e.g.*, fever) with an increased risk of bacteremia), non-steroidal anti-inflammatory drug therapy and vaccines.

According to the USDA, there are approximately 9.2 million lactating dairy cows in the United States. Jaguar estimates from USDA sources that there were over 11.0 million dairy calves born in 2013. Dairy cows are continuously bred, both to maintain lactation and to produce dairy calves to maintain the herd. Dairy calves are separated from their mothers shortly after birth and raised on commercial milk replacers until weaned at about 60 days of age. Almost one in four, or 23.9%, of dairy heifer calves had diarrhea or other digestive problems according to the USDA *Dairy 2007* study. Scours, diarrhea or other digestive problems are responsible for more than half of all preweaned calf deaths, and result in supportive care and treatment costs, impaired weight gain and long-term reduction in milk production. Of dairy farm operations surveyed in the *Dairy 2007* study, 62.1% used antibiotics for diarrhea or other digestive problems, including preweaned heifer calves not reporting diseases or disorders. Of preweaned calves that were affected by diarrhea or other digestive problems, almost three-fourths, or 74.5%, were treated with an antibiotic.

Jaguar's Solution

Jaguar believes Neonorm Calf is an ideal solution to aid fluid retention in dairy and beef calves suffering from scours. Neonorm Calf has been formulated and clinically tested to support fluid retention by specifically addressing the normalization of stool formation and ion and water flow in the intestinal lumen of newborn dairy calves with scours. There are an estimated 22.0 million beef calves in the United States, and published sources indicate that approximately 2.4% of beef calves younger than three weeks old suffer from diarrhea. Like Canalevia, Neonorm Calf acts locally in the gut and is minimally absorbed systemically. It does not alter gastrointestinal motility, has no significant effects on normally functioning intestinal ion channels and electrolyte or fluid transport, and has no side effects different from placebo. As a result, stool formation is normalized in a short period of time, weight loss is mitigated, supportive care costs and rehydration therapies such as ORS are reduced, and the risk of mortality is minimized.

Clinical Data

A challenge clinical study was completed in May 2014 by researchers from Cornell, and published in 2015 in the official journal of the American Dairy Science Association, *Journal of Dairy Science*. The results of this study suggest that Neonorm Calf can significantly increase the fecal dry matter of neonatal calves with experimentally-induced enterotoxigenic *E. coli* diarrhea, and suggest a potential benefit of Neonorm Calf in supporting weight gain in calves.

A further analysis, completed in October 2015, of the above-referenced Cornell study supports a benefit of Neonorm Calf on the optimization of the intestinal microbiome profile in preweaned dairy calves, a potential prebiotic benefit. The microbiome is a community of microorganisms that live normally in the gut and are vital to maintenance of gut health.

Jaguar recently completed a placebo-controlled study in conjunction with researchers from Cornell to evaluate the herd-wide efficacy of the prophylactic use of a second-generation formulation of Neonorm Calf administered in liquid on naturally occurring diarrhea in preweaned dairy calves and investigate the possible prebiotic benefit of the product. This double-blinded, randomized study involved 40 Holstein bull calves affected with naturally occurring diarrhea. The study results show that calves under prophylactic administration of Neonorm Calf had significantly lower water content in fecal samples at multiple measurement points, lower incidence of diarrhea, and had fewer fluid therapy interventions. The possible beneficial prebiotic mechanism of Neonorm Calf would supplement and is potentially synergistic with the anti-secretory and weight gain benefits of the product.

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Fecal scoring, which was conducted daily during the study period, indicated a significantly lower incidence of diarrhea among Neonorm-treated calves on most treatment days than among calves in the placebo group. The study also assessed the incidence of diarrhea from days 1 to 25 of life. Calves in the Neonorm-treated group experienced a highly significant reduction in the incidence of diarrhea during this period compared to those in the placebo group.

Dehydration was assessed twice daily for all calves in the study. Results showed that severe dehydration requiring the administration of intravenous ("IV") fluid therapy was reduced by approximately 50% in the Neonorm-treated calves. Moreover, overall rescue therapy, requiring either oral or IV fluid administration, for both severe and moderate dehydration, was significantly reduced in the Neonorm-treated animals.

As Jaguar announced on February 2, 2017, Jaguar has begun entry into the organic market with Neonorm Calf, following listing of Neonorm Calf with an organization that evaluates livestock products in accordance with the U.S. Department of Agriculture (USDA) National Organic Standards on behalf of specified producers in New York state. Additionally, Jaguar is applying to have Neonorm Calf listed by the Organic Materials Review Institute (OMRI). OMRI is an international nonprofit organization that determines which input products are allowed for use in organic production and processing. OMRI Listed® products are allowed for use in certified organic operations under the USDA National Organic Program. According to the Organic Trade Association's (OTA) 2016 Organic Industry Survey, the U.S. organic industry posted new records in 2015, with total organic product sales hitting a new benchmark of $43.3 billion, up 11% from the previous year's record level and outpacing the overall food market's growth rate of 3%. According to OTA, dairy, the second biggest organic food category, accounted for $6.0 billion in sales, an increase of over 10%, and dairy accounts for 15% of total organic food sales.

Organic livestock production plays a vital role in support of a sustainable and safe farm and food system, both in the U.S. and internationally. According to a report published by Allied Market Research, the global market for organic dairy food and drinks organic milk, yogurt, cheese, and others is expected to grow at a compound annual growth rate of 14.25% from 2016 to reach $36.7 billion by 2022 from $14.5 billion in 2015. Jaguar believes Neonorm Calf will qualify as allowable for use on certified organic dairies throughout the U.S., and Jaguar is currently working to obtain additional required listings.

Neonorm Line Extensions

Jaguar believes that due to Neonorm Calf's mechanism of action and its data in preweaned dairy calves, Jaguar will be able to develop and commercialize species-specific formulations of Neonorm for multiple other animal species, such as horses, goats and sheep. Jaguar believes that there is an opportunity to target large-scale commercial livestock operations, first in the United States, and later, internationally. In less developed nations, where not only dairy and beef cattle but also buffalo, goat and sheep provide livelihoods for local populations, reducing losses related to diarrhea can provide significant monetary, social and health benefits. Today, these groups are already accessed by distributors with whom Jaguar intends to work to extend the reach of Neonorm Calf and line extension products.

In November 2015 Jaguar completed an initial proof-of-concept study (NEO101) of Neonorm Foal, its lead non-drug product to promote normal fecal formation and reduce fluid loss in foals, that involved 60 foals. The objective of this randomized, multi-site, blinded, placebo-controlled study was to evaluate the safety and performance of the product for treatment of foals suffering from secretory diarrhea, and the treated animals received Neonorm Foal in combination with a third-party probiotic. In December 2015 Jaguar announced positive results for an exploratory, investigator-initiated follow-up study (ARG102) which assessed the safety and performance of Neonorm Foal, without inclusion of a probiotic, in preweaned foals with watery diarrhea. The results of a meta-analysis between the two studies, which both took place in Argentina, demonstrated a significantly higher percentage of foals

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with clinical response and resolution of diarrhea for Neonorm Foal, from either ARG102 or NEO101, compared with the placebo group in NEO101.

During the 72-hour administration period, 35% of foals receiving the placebo in NEO101 were identified as clinical responders, compared with 85% of foals treated with Neonorm Foal in ARG102. For the purposes of both studies, clinical responders were defined as foals that achieved a formed stool by the end of the reported period.

During the 72-hour administration period, resolution of diarrhea was observed in 41% of placebo-treated foals in NEO101 compared with 85% of foals receiving Neonorm Foal in ARG102. For the purposes of both studies, resolution of diarrhea was defined as a foal that produced a formed stool at any point during the reported period.

The reception among users of Neonorm Foal, the anti-diarrheal for newborn horses that Jaguar launched in early 2016 with a nationwide campaign offering samples, has been overwhelmingly positive. User feedback regarding Neonorm Calf also continues to be very favorable. Commercialization of these two non-prescription products has provided numerous benefits that Jaguar intends to leverage during its expected introductions of high value, first-in-class prescription drug products into the U.S. marketplace and beyond. The commercialization process has allowed us to extend to animals the clinical utility of the novel mechanism of action of *Croton lechleri*-derived anti-secretory products, refine messaging to veterinarians, fine-tune internal processes, forge commercial manufacturing relationships, and develop commercial infrastructure with important distributors relevant to both prescription and non-prescription products.

In December 2015 Jaguar conducted the soft launch of Neonorm Foal. Jaguar is planning studies of an equine formulation of Neonorm for adult horses with episodic diarrhea. Published studies estimate that there were 9.2 million horses in the United States in 2005. Diarrhea is among the most common clinical complaints in foals. Often, diarrhea occurs in the first 30 days of the foal's life, both from infections and non-infectious causes, such as lactose intolerance and overfeeding. Some cases are severe and life threatening. A majority of foals will exhibit diarrhea at some point within the first two months of life. In adult horses, episodic diarrhea is mostly associated with diseases of the large intestine and damage to the colon or disturbance of colonic function. Typically, diarrhea in horses is treated with fluid replenishment and electrolytes, deworming agents and antibiotics, and intestinal protectants and absorbents, as well as anti-motility agents. To Jaguar's knowledge there are currently no anti-secretory products approved by the FDA for veterinary use.

Other Product Candidates and Development

Jaguar has planned multiple clinical studies over the next 12 to 18 months to expand Canalevia and Neonorm to additional species. Jaguar believes that it will be successful because:

- Jaguar has existing safety and efficacy data for its products and product candidates in dogs, dairy calves and/or humans;
- each of these products works through the normalization of ion and water flow into the intestinal lumen; and
- this physiological pathway is generally present in mammals.

Additionally, Jaguar plans to initiate a safety and proof of concept study for Virend in 2017. Both Virend and NP-500 have been through Phase 2 human clinical testing by third parties and studies with combinations of rifaximin and *Croton lechleri* derived products. NP-500 is isolated and purified from a plant indigenous to the southwestern United States, and in traditional medicine, the plant was brewed as a tea and used for the treatment of diabetes and other various illnesses. Jaguar is currently developing species-specific formulations of NP-500 to treat obesity-related metabolic dysfunction in

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dogs, Type II diabetes in cats and metabolic syndrome in horses, and have filed three INADs for these indications.

According to a 2013 national survey of veterinarians, approximately 17% of dogs in the United States are obese. Studies show that obesity is more common in elderly dogs, as well as in neutered dogs. Obesity-related metabolic dysfunction manifests in altered lipid profiles, insulin resistance and mild hypertension, which could decrease a dog's lifespan. There are currently no FDA-approved products for the treatment of metabolic syndrome or insulin resistance in dogs. In cats, the prevalence of obesity-related diabetes or Type II diabetes is high and increasing. In horses, insulin resistance is associated with an equine metabolic syndrome characterized by obesity, regional adiposity and hypertriglyceridemia. It is also known to be a risk factor for laminitis. Various studies report the prevalence of insulin resistance as 10% and 28% in horses and ponies, respectively. There are also currently no FDA-approved products for the treatment of metabolic syndrome in horses.

Jaguar anticipates that its development activities will benefit from centralized activities, including shared use of the manufacturing and regulatory documentation for chemistry, manufacturing and controls, or CMC. Jaguar also anticipates being able to enter into combined clinical research agreements and activities with companion animal clinical trial sites for dogs and cats.

Sales and Distribution

As Jaguar announced on January 31, 2017, Jaguar and Elanco US Inc., a subsidiary of Eli Lilly and Company, have signed an agreement to license, develop, co-promote, and commercialize Canalevia, Jaguar's drug product candidate under investigation for treatment of various types of diarrhea in dogs. The agreement grants Elanco exclusive global rights to Canalevia for use in companion animals. Jaguar and Elanco will collaborate on the global development of the product and on its commercialization in the U.S.. Under the terms of the agreement, Jaguar has retained the commercial responsibility for the CID indication of Canalevia in dogs, which has received MUMS designation from the FDA and which the company expects will be the first indication available commercially in the next year. Jaguar has also retained the commercial responsibility for the EID indication of Canalevia in dogs.

As Jaguar announced on December 12, 2016, Jaguar has signed a distribution agreement with Henry Schein, Inc., the world's largest provider of health care products and services to office-based dental, animal health and medical practitioners, for exclusive distribution of Jaguar's Neonorm Foal product to all segments of the U.S. equine market. Henry Schein's animal health business, Dublin, Ohio-based Henry Schein Animal Health, employs approximately 900 team members and had 2015 net sales of $2.9 billion. With 12 strategically positioned, state-of-the-art distribution facilities and 10 inside sales centers nationwide, Jaguar believes Henry Schein Animal Health is positioned to bring a broad selection of veterinary products and strategic business solutions to more than 26,000 veterinary professionals nationwide. The agreement became effective on December 9, 2016, and, subject to provisions specified in the agreement, shall continue in force for an initial period of one year. Thereafter, unless either party notifies the other of its intent not to renew the term of the agreement at least 30 days prior to the end of the then current term, the term shall be automatically renewed upon expiration for successive renewal terms of one year.

In September 2014, Jaguar launched Neonorm for preweaned dairy calves under the brand name Neonorm Calf in the Upper Midwest region, and expanded the launch nationwide in early 2015. In December 2015 Jaguar conducted the soft launch of Neonorm Foal, its non-prescription anti-diarrheal product for newborn horses. Jaguar expects to launch Canalevia in 2017 for CID, and for acute diarrhea in early 2018. Jaguar intends to continue the development of its focused commercial effort for both the production and companion animal markets. Jaguar will focus its commercial efforts on educational activities and outreach to key opinion leaders and decision makers at key regional and global accounts for production animals and high prescriber veterinarians for companion animals. In

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August 2014, Jaguar entered its first regional distribution agreement for the Upper Midwest region, and in September 2014, entered an agreement with a national master distributor, who also distributes prescription products for the companion animal market. In February 2015, Jaguar entered a five-year distribution agreement with Biogenesis Bagó for sale and distribution of Neonorm Calf in South America. Biogenesis Bagó is the largest veterinary biotechnology company in Latin America, a region that contained approximately 401 million dairy and beef cattle in 2009 and produces approximately 11% of the world's milk supply. In 2014 Biogenesis Bagó was named "Best Animal Health Company in Latin/South America" by a publication called Animal Pharm. Jaguar's distribution agreement provides Biogenesis Bagó with exclusive distribution rights for Neonorm Calf in Argentina, Brazil, Paraguay, Uruguay, and Bolivia. Under the terms of the distribution agreement, Jaguar can terminate the agreement if Biogenesis Bagó fails to meet annual sales goals for each year of the five-year agreement, and Jaguar may revoke exclusivity if Biogenesis Bagó fails to meet guaranteed minimum sales. Jaguar also agreed to additional incentive payments if stretch goals are exceeded.

Jaguar plans to partner with other leading distributors to deliver its products to customers both in the United States and internationally, and may also explore entering partnerships that include payment of upfront licensing fees for its products and product candidates for markets outside the United States where appropriate. Jaguar expects that its current and future partners will have the presence, name recognition, reputation and reach in the veterinary markets and in both key urban and rural centers, as appropriate. Jaguar believes this overall approach is scalable and transferable as Jaguar expands its commercialization efforts, as well as when Jaguar further expands internationally including to resource-constrained countries where food safety issues are emerging global challenges.

Manufacturing

The plant material used to manufacture Canalevia, Neonorm and related products is crude plant latex, or CPL, extracted and purified from *Croton lechleri*, a widespread and naturally regenerating tree in the rainforest that is managed as part of sustainable harvesting programs. The tree is found in several South American countries and has been the focus of long-term sustainable harvesting research and development work. Jaguar's collaborating suppliers obtain CPL and arrange for the shipment of CPL to Jaguar's third-party contract manufacturer. CPL will also be shipped to Jaguar for manufacturing after Jaguar establishes its own API manufacturing capability.

Jaguar's third-party contract manufacturer will process CPL into both crofelemer, the API in Canalevia, and the botanical extract used in both Neonorm Calf and Neonorm Foal. This manufacturing process uses exclusive Napo intellectual property licensed pursuant to the Napo License Agreement. Canalevia will be manufactured by the same process used to manufacture the API that was used in the animal safety studies and the human studies in support of the approval of Mytesi (formerly known as Fulyzaq). Napo has also licensed this intellectual property to third parties in connection with its licenses related to the development and commercialization of crofelemer for human use. While Jaguar believes these third parties have developed their own proprietary manufacturing specifications pursuant to their license agreements, such third-party intellectual property is unknown to Jaguar, is not licensed to Jaguar pursuant to the Napo License Agreement, and is not part of the intellectual property that Jaguar intends to use for the manufacture of API in its licensed field of use. Similarly, the manufacture of Neonorm depends only on technology licensed from Napo. The license grant specifically excludes intellectual property rights developed pursuant to a prior collaboration agreement between Napo and Glenmark Pharmaceuticals, Ltd., or Glenmark, the manufacturer of the API in Mytesi (formerly known as Fulyzaq). In May 2014 and June 2014, and as amended in February 2015, Jaguar entered into binding memorandums of understanding with Indena S.p.A. to negotiate a definitive commercial supply agreement for the manufacture of the API in Canalevia and the botanical extract in Neonorm. Jaguar has furnished equipment to Indena S.p.A. for use in a facility that will be dedicated to the manufacture of crofelemer and the botanical extract.

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In December 2015, Indena delivered 360 kilos of the standardized botanical extract to Jaguar. Jaguar currently owns enough of the Neonorm standardized botanical extract to formulate a combination of approximately one million treatments of Neonorm Calf or Neonorm Foal.

Pursuant to the memorandums of understanding as amended, Jaguar agreed to pay Indena S.p.A. the following fees in connection with the establishment of its manufacturing arrangement:

- a start-up fee equal to €500,000, payable in two equal installments, both of which were paid in May 2015;
- fees associated with the technology transfer and manufacturing process adaptation equal to €620,000 for API which was paid in May and July 2015;
- fees for the design and set up of a dedicated suite qualified for pharmaceutical and veterinary products equal to €170,000 which was paid in May 2015;
- deliverables fees equal to €500,000, €250,000 of which was paid in December 2015, and €250,000 of which was payable by the end of March 2016, with the understanding that these fees will be credited against payments agreed to under the future commercial supply agreement; and
- a €300,000 bonus fee payable in two equal installments, the first of which was paid in March 2015, with the remainder paid by the end of March 2016.

Jaguar has made all contractual payments to Indena as of March 31, 2016. In March 2015, Indena S.p.A. agreed to delay payment of the fees payable by the end of March 2015 until the earlier of April 30, 2015 or the completion of Jaguar's initial public offering. In July 2015 and December 2015 Indena S.p.A agreed to delay payment of certain fees payable until March 2016. Jaguar has made all contractual payments to Indena as of March 31, 2016. In June 2014, as contemplated by the memorandums of understanding, Jaguar also issued Indena S.p.A. a warrant to acquire 16,666 shares Jaguar common stock at an exercise price per share equal to 90% of the initial public offering price, which expires in June 2019.

In September, 2015 Jaguar entered a distribution agreement with Glenmark Pharmaceuticals Ltd., or Glenmark. With the execution of the agreement, Jaguar intends to use Glenmark as Jaguar's primary manufacturer of crofelemer for animal health use. Jaguar's agreement with Glenmark supplements its previously announced manufacturing agreement with Indena S.p.A for the standardized botanical extract in Neonorm Calf and Neonorm Foal. Jaguar intends to eventually use Indena as an alternative supplier for crofelemer.

In October 2015, Jaguar announced that it signed a crofelemer formulation development and manufacturing contract with Patheon Pharmaceuticals Inc., or Patheon, a leading global provider of drug development and delivery solutions to the global pharmaceutical and biopharma industries. Under the terms of the contract, Patheon will provide enteric-coated crofelemer tablets for Jaguar for use in animals. The tablets will be used in Jaguar's pivotal efficacy trial for Canalevia, which began in the fourth quarter of 2015. Jaguar expects to use safety and effectiveness data from this trial in support of the initiation of the filing of a NADA with the FDA for Canalevia in 2017 for the indication of acute diarrhea in dogs.

Patheon is the manufacturer of Mytesi (formerly known as Fulyzaq), a human-specific, enteric-coated formulation of crofelemer that was approved by the FDA in 2012 for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy. Members of Jaguar's management team developed crofelemer while working at Napo where the drug was initially developed.

Jaguar also plans to enter agreements with third parties for the formulation of the API and botanical extracts into finished products to be used for planned studies and commercialization.

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The facilities of Jaguar's third-party contract manufacturers that will manufacture Jaguar's API and botanical extract, as well as formulate Jaguar's finished products, comply with cGMP and other relevant manufacturing requirements.

Competition

The animal health industry is dominated by large independent companies such as Zoetis Inc., a standalone animal health company that was spun out from Pfizer, Inc. in 2013, as well as subsidiaries of large pharmaceutical companies, including Novartis Animal Health Inc., a subsidiary of Novartis International AG., Merck Animal Health, the animal health division of Merck & Co., Inc., Merial Inc., the animal health division of Sanofi S.A., Elanco Animal Health, the animal health division of Eli Lilly and Company, Bayer Animal Health GmbH, a subsidiary of Bayer AG, and Boehringer Ingelheim Animal Health, the animal health division of Boehringer Ingelheim GmbH. There are also animal health companies based in Europe, including Vétoquinol S.A., Virbac S.A., Dechra Pharmaceuticals PLC and Ceva Animal Health S.A.

Additionally, smaller animal health companies, such as Aratana Therapeutics, Inc., Kindred Biosciences, Inc., Phibro Animal Health Corporation, Nexvet Biopharma and Parnell Pharmaceuticals Holdings Ltd, recently completed initial public offerings of their stock in the United States and may choose to develop competitive products. Jaguar believes that the large human pharmaceutical companies may also decide to spin out their animal health subsidiaries into standalone companies.

Although, to Jaguar's knowledge, there are currently no FDA-approved anti-secretory products to treat acute diarrhea in dogs, Jaguar anticipate that Canalevia, if approved for this indication, will face competition from various products, including products approved for use in humans that are used extra-label in animals. Jaguar is aware that veterinarians typically treat acute diarrhea in dogs with antibiotics, probiotics, dietary restrictions and products approved and formulated for humans, such as Imodium and other anti-motility agents, as well as binding agents that absorb water, such as Kaopectate and Pepto-Bismol. None of these treatment options address the water loss associated with acute diarrhea. Jaguar is not aware of any veterinarians prescribing Mytesi (formerly known as Fulyzaq) extra-label for use in dogs, and the indication of Mytesi is for a disease that does not occur in dogs. Further, because none of the human products are FDA approved for animal use, veterinarians, although allowed to dispense human products for animal use, do not have the benefit of clinical support with respect to efficacy or dosing. Moreover, administering a potentially unpalatable human formulation is often difficult and may lead to further uncertainty of the amount actually ingested by the dog. However, this practice may continue and Canalevia may face competition from these products. Canalevia could also potentially face competition from Mytesi were veterinarians to prescribe it extra-label. Extra-label use is the use of an approved drug outside of its cleared or approved indications in the animal context. All of Jaguar's potential products could also face competition from new products in development. These and other potential competing products may benefit from greater brand recognition and brand loyalty than Jaguar's products and product candidates may achieve.

Intellectual Property

Napo License Agreement

In January 2014, Jaguar entered into the Napo License Agreement, which Jaguar amended and restated in August 2014 and further amended in January 2015, pursuant to which Jaguar acquired an exclusive, sublicensable, transferable, worldwide license to certain intellectual property rights of Napo and its affiliates to research, develop, formulate, make, have made, use, have used, market, offer for sale, sell, have sold, and import, and to otherwise exploit products of Napo and its other affiliates for all veterinary treatment uses and indications for all species of animals. The license grant specifically excludes intellectual property rights developed pursuant to a prior collaboration agreement between

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Napo and Glenmark Pharmaceuticals, Ltd., the manufacturer of the API in Mytesi (formerly known as Fulyzaq). Under the Napo License Agreement, Napo also assigned to Jaguar certain raw materials and equipment and granted Jaguar a right of reference to the entirety of the information included in the human approved new drug application of crofelemer.

Under the terms of the Napo License Agreement, Jaguar is responsible for, and shall ensure, the development and commercialization of products that contain or are derived from the licensed Napo technology (collectively referred to herein as the Products) worldwide in the field of veterinary treatment uses and indications for all species of animals.

In consideration for the license, Jaguar is obligated to pay a one-time non-refundable license fee of $1.75 million, less the option fee of $100,000 paid in July 2013 pursuant to a term sheet Jaguar signed with Napo. Jaguar paid $25,000 to Napo towards the license fee in December 2014 and in January 2015, agreed that the remaining license fee payment will be paid in cash, or, if mutually agreed with Napo, in shares of Jaguar common stock according to the following schedule:

Payment Date	License Fee Amount	
Amendment Date	$	25,000
March 31, 2015	$	25,000
June 30, 2015	$	150,000
September 30, 2015	$	500,000
December 31, 2015	$	500,000
March 31, 2016	$	425,000
Total	$	1,625,000

In the years ended December 31, 2016 and 2015, Jaguar paid $425,000 and $1.2 million in accordance with the agreement.

Pursuant to the Napo License Agreement, Jaguar will owe Napo a 2% royalty on annual net sales of all Products that are prescription drugs (such as Canalevia and any line extensions) approved by the FDA or the equivalent regulatory agency in another country, and a 1% royalty of annual net sales of non-prescription products (such as Neonorm and any line extensions) that do not require pre-marketing approval from the FDA or the equivalent regulatory agency in another country. Upon agreement with Napo, Jaguar may elect to remit any milestone payments and/or royalties in the form of Jaguar common stock.

The royalty term expires on a country-by-country and Product-by-Product basis on the later of: (i) 10 years from the first sale of a Product in such country, on an animal by animal basis; and (ii) the first date on which there is no longer (A) a valid claim within the licensed patent rights covering the use, manufacture or sale of such Product, or (B) any data exclusivity with respect to such Product in such country conferred by the applicable regulatory authority, and in each case of (A) and (B), a competitive product has been introduced into the market in such country. The royalties payable to Napo are subject to reduction, capped at a specified percentage, for any third-party payments made to obtain a license or other rights to issued patents that might present a commercial obstacle to the development, manufacture, use, or sale of a Product in a country. Additionally, if the royalty term for a Product is ongoing post-expiration of the last valid claim within the licensed patent rights that covers such product in any given country, then the royalties Jaguar owes Napo will be reduced by a specified percentage until expiration of the royalty term for such Product in such country. Upon the expiration of each royalty term, on a country-by-country and Product-by-Product basis, the license grants shall be fully paid up and Jaguar will have perpetual non-exclusive licenses for such Products in such countries. At any time during the term of the agreement, if Napo sells all of its assets relating to the use, production or exploitation of *Croton lechleri* derivative products to a third party, all of the rights

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granted to us relating to *Croton lechleri* derivative products under the license shall become exclusive in the field of veterinary treatment uses and indications for all species of animals, perpetual, fully paid-up, royalty-free and irrevocable, with the right to grant sublicenses.

Under the terms of the Napo License Agreement, Jaguar owns all rights, title and interest in its intellectual property and any joint intellectual property developed under the license. Jaguar granted Napo a non-exclusive, paid-up, irrevocable worldwide license to Jaguar's intellectual property developed under the Napo License Agreement for use outside the veterinary field, and an exclusive, paid-up worldwide license to any joint intellectual property developed under the Napo License Agreement outside the veterinary field. Jaguar agreed to defend, indemnify and hold Napo, its affiliates, and its officers, directors, employees, consultants and contractors harmless from and against any losses, costs, damages, liabilities, fees and expenses arising out of any third-party claim related to Jaguar's gross negligence or willful misconduct, breach of Jaguar's representations, warranties or covenants or the manufacture, sale or use of the Product or Products, in each case, unless such third-party claim is subject to indemnification by Napo. Napo agreed to defend, indemnify and hold Jaguar, its affiliates, and its officers, directors, employees, consultants and contractors harmless from and against any losses, costs, damages, liabilities, fees and expenses arising out of any third-party claim related to Napo's, its affiliate's or its licensees' (except for us) gross negligence or willful misconduct, or Napo's breach of its representations, warranties or covenants.

Jaguar may terminate the Napo License Agreement upon Napo's uncured material breach, bankruptcy or at will after certain notification periods. Napo may terminate the Napo License Agreement upon Jaguar 's uncured material breach or bankruptcy after certain notification periods.

As Jaguar announced on January 31, 2017, Jaguar and Elanco US Inc., a subsidiary of Eli Lilly and Company, have signed an agreement to license, develop, co-promote, and commercialize Canalevia, Jaguar's drug product candidate under investigation for treatment of acute diarrhea and CID in dogs. The agreement grants Elanco exclusive global rights to Canalevia for use in companion animals.

Patent Portfolio

Under the Napo License Agreement, Jaguar has exclusive rights in the veterinary field to an international patent family related to International Patent Application WO1998/16111. The patents and patent applications in this family are directed to enteric protected formulations of proanthocyanidin polymers isolated from *Croton spp* or *Calophyllum spp.* (such as crofelemer and Neonorm), and methods of treating watery diarrhea using the enteric protected formulations for both human and veterinary uses. As such, the patents and patent applications of this family cover certain formulations of crofelemer, including Canalevia, as well as the standardized botanical extract in Neonorm, and methods of treating diarrhea using these formulations. There are three U.S. patents and a pending U.S. patent application in this family, including, US 7,323,195, which has a term until at least June 7, 2018, US 7,341,744, which has a term until at least January 11, 2018, and US 8,574,634, which has a term until at least January 11, 2018. The term of one of US 7,323,195 or US 7,341,744 may be extended to June 2021 and December 2020, respectively, to account for regulatory delay in obtaining human marketing approval for crofelemer (such potential extensions have been filed for and only one of the patents can be extended). Patent protection for enteric protected formulations of crofelemer and methods of use has also been obtained outside the United States, including in Europe, Australia, Canada, India, Japan, Korea, Mexico, New Zealand and Taiwan, with terms extending until at least October 14, 2017 in these jurisdictions. In particular, European patent EP 0 935 417 and Japanese patent no. 4195728 provide protection for enteric protected formulations of crofelemer and the standardized botanical extract in Neonorm in Europe and Japan, respectively, with terms that extend until at least October 14, 2017.

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The patents and patent applications Jaguar licensed from Napo, or the Napo Patents, which cover both human and veterinary uses, were previously licensed by Napo to Salix for certain fields of human use. On March 4, 2016, Napo and Salix settled litigation and all rights to crofelemer and Mytesi (formerly known as Fulyzaq) were returned to Napo and the collaboration agreement between Salix and Napo, or the Salix Collaboration Agreement, was terminated. Napo has the responsibility to file, prosecute and maintain the Napo Patents. As a result, under the Napo License Agreement, Jaguar only has the right to maintain any issued patents within the Napo Patents that are not maintained in accordance with the responsibilities of Napo. There are three issued Napo Patents in the United States that cover, collectively, enteric protected formulations of proanthocyanidin polymers isolated from *Croton spp.* and methods of treating watery diarrhea using the enteric protected formulations for both human and veterinary uses.

Jaguar has filed and have currently pending four applications under the PCT, four U.S. non-provisional patent applications and three provisional patent applications relating to veterinary uses of *Croton* proanthocyanidin polymer compositions, including crofelemer, Neonorm and Canalevia, and product combinations under development. These applications are directed to treatment of watery diarrhea in newborn and young animals, including methods of improving mortality and weight gain in newborn animals, treatment of stress-induced diarrhea in animals, and treatment of watery diarrhea caused by salmonella in animals. These applications also focus on the treatment of diarrhea in companion animals such as dogs and cats. In addition, an application has been submitted for the treatment of ulcers and related symptoms in animals with an emphasis on ulcers in horses. An application has also been filed on a surprising prebiotic effect of crofelemer in bovine and other animal species based on unexpected research findings that indicate a prebiotic enhancement of the gut bacteria in animals. One other patent application has been filed combining crofelemer with rifaximin, a non-absorbed antibiotic for the treatment of bacteria induced diarrhea in multiple animal species. Applications have been filed relating to treatment of porcine epidemic virus in piglets and treatment of diarrhea in livestock with a formulation that is not enteric protected. Patents that may issue based upon applications filed claiming benefit of these provisional patent applications should have terms that extend until at least May 2035.

Jaguar has two issued US patents licensed exclusively from Napo for veterinary use, covering NP-500 and its use. NP-500 is the API in Jaguar's drug product candidates to treat and manage diseases related to insulin-resistance, such as obesity-related metabolic dysfunction in dogs and cats, diabetes mellitus, and potentially equine laminitis. The two NP-500 patents claim benefit to a provisional application submitted to the USPTO by Napo in April 2011. Per the terms of the license agreement between Napo and Jaguar, Jaguar has an exclusive license to these intellectual properties for all veterinary treatment uses and indications for all species of animals except humans.

Trademarks

Jaguar plans to market its products under a trademark or trademarks it selects and it will own all rights, title and interest, including all goodwill, associated with such trademarks.

Government Regulation

The development, approval and sale of animal health products are governed by the laws and regulations of each country in which Jaguar intends to seek approval, where necessary, to market and subsequently sell its prescription drug and non-drug products. To comply with these regulatory requirements, Jaguar is establishing processes and resources to provide oversight of the development, approval processes and launch of its products and to position those products in order to gain market share in each respective market.

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United States

Certain federal regulatory agencies are charged with oversight and regulatory authority of animal health products in the United States. These agencies, depending on the product and its intended use may include the FDA, the USDA and the Environmental Protection Agency. In addition, the Drug Enforcement Administration regulates animal therapeutics that are classified as controlled substances. In addition, the Federal Trade Commission may in the case of non-drug products, regulate the marketing and advertising claims being made.

The approval of prescription drugs intended for animal use is regulated by the FDA's Center for Veterinary Medicine, or CVM. The CVM consists of six offices that work together to, in part, approve new drugs for commercialization and thereafter monitor those commercialized drugs once in the market. The Office of New Animal Drug Evaluation, or ONADE, is the lead office for reviewing novel drug candidates. Jaguar, as the sponsor of a novel drug candidate, commences the development and approval process by initiating communication with the ONADE and opening an INAD file. As part of this process, Jaguar will also schedule a discussion of the novel drug's development plan in order to obtain agreement from the CVM for the number, type and design of studies needed to obtain FDA approval of the novel drug.

As required by the FDA, new animal drug products must obtain marketing approval through the NADA process. Under the Administrative New Animal Drug Application, or Administrative NADA, process, a sponsor can engage in a phased submission of the required technical sections of an NADA, known as a rolling NADA, as opposed to submitting the entire application at once with a standard NADA. The requirements for all NADAs are the same regardless of whether a sponsor chooses the rolling NADA or the standard NADA submission. Under the phased review, once all technical sections have been submitted and reviewed, the sponsor submits an Administrative NADA to reflect that all technical sections of the NADA have been submitted and reviewed, each such technical section meets the requirements for approval and the CVM has issued technical section complete letters for each technical section. The phased review and Administrative NADA allow a drug sponsor to engage with the FDA as to each technical section to ensure that each section meets all requirements prior to submission of the application for approval. Phasing of NADA submissions is a voluntary process.

Once the tasks set forth in the development plan have been completed, including the clinical work as well as the chemistry and manufacturing work (feasibility, validation and stability of the drug inclusive), Jaguar, as the novel drug sponsor will need to provide to the FDA through the application process, information as to the safety and efficacy of the drug candidate, and, if needed, human food safety studies. These food safety studies are only required for drugs intended for use in production animals, and Jaguar currently has no plans to develop drugs for production animals. Additionally, the application will contain a module on CMC, which describes the plan for manufacturing the drug including the API, the final formulation, where it will be made, how it will be made, how the drug will be packaged, how it can be stored, the conditions required for storage and how long it can be stored before expiry. A major part of the CMC section is the analysis Jaguar employs to ensure that the manufactured drug is of a high quality, is consistently manufactured under cGMP and is stable. Other significant components to the application Jaguar has to complete before receiving drug approval includes a draft label that will list specific information such as dosing information, intended use, warnings, directions for use, and other information as required by the regulations. The package insert that will contain information on studies, warnings, drug interactions, intended use and dosing is considered part of the label in addition to that which is adhering to the container itself. The CVM ensures that the labeling provides all the necessary information to use the drug safely and effectively, and that it clearly discloses the risks associated with the drug.

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MUMS Designation

The Minor Use and Minor Species Animal Health Act, or MUMS Act, became effective in August 2004. The purpose of the MUMS Act was twofold: first, to encourage the development and availability of more animal drugs that are intended to be used in a major species defined as dogs, cats, cattle, horses, chickens, turkeys and pigs to treat diseases which occur infrequently or in limited geographic areas, therefore having an impact on a smaller number of animals on a yearly basis; and second, to encourage the development and availability of animal drugs for use in minor species (defined as all animals other than humans that are not one of the major species). The drug sponsor may seek conditional approval of the drug product provided the Office of Minor Use Minor Species, or "OMUMS" acknowledges that the intended use fits within a small number of animals treated per annum. A drug does not have to be designated to be eligible for conditional approval, however if OMUMS designates a MUMS drug, certain incentives and exclusivities are available to the sponsor. The MUMS designation is modeled on the orphan drug designation for human drug development and has certain financial incentives available to encourage MUMS drug development such as the availability of grants to help with the cost of the MUMS drug development. Also, drug developers of MUMS drugs are eligible to apply for a waiver of the user fees once the MUMS designation has been given by OMUMS. Jaguar believes that it qualifies for MUMS designation for Canalevia as a minor use in a major species because the estimated total number of dogs in the United States affected by CID is less than 70,000. Jaguar also believes that Canalevia will qualify for MUMS designation for EID because, in Jaguar's estimate, the total number of dogs in the United States affected by EID on an annual basis is less than 70,000. To obtain conditional approval of a MUMS drug, the company must submit CMC and safety data similar to that required for an NADA, as well as data suggesting a reasonable expectation of effectiveness. After the submission and the review of the application, the FDA through the CVM can then grant a conditional approval (CA-1). This approval allows for a commercialization of the product, while the sponsor continues to collect the substantial evidence of effectiveness required for a full NADA approval. The sponsor has up to five years to demonstrate substantial evidence of effectiveness for a previously conditionally approved drug. Ideally, MUMS designation helps move the product forward in development; however, it may not shorten the time to full commercialization. A sponsor that gains approval or conditional approval for a MUMS designated drug receives seven years of marketing exclusivity.

Protocol Concurrence

As Jaguar announced in April 2016, it obtained protocol concurrence from the FDA for its pivotal trial of Canalevia that it initiated in December 2015 for acute diarrhea in dogs. Jaguar plans to pursue protocol concurrences from the FDA for future pivotal trials in other indications. Under this process, a protocol is submitted to the FDA voluntarily by a drug sponsor. The FDA review of the protocol for a pivotal study makes it more likely that the study will generate information the sponsor needs to demonstrate whether the drug is safe and effective for its intended use. It creates an expectation by the sponsor that the FDA will not later alter its perspectives on these issues unless public or animal health concerns appear that were not recognized at the time of protocol assessment. Even if FDA issues a protocol concurrence, ultimate approval of an NADA by the FDA is not guaranteed because a final determination that the agreed-upon protocol satisfies a specific objective, such as the demonstration of efficacy, or supports an approval decision, will be based on a complete review of all the data submitted to the FDA. Even if Jaguar were to obtain protocol concurrence, such concurrence does not guarantee that the results of the study will support a particular finding or approval of the new drug.

Marketing Exclusivity

Jaguar is currently planning on seeking MUMS designation for some of its prescription drug products and if it receives such a designation, it will be entitled to a seven-year marketing exclusivity,

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which means that it will face no competition from another sponsor marketing the same drug in the same dosage form for the same intended use. If Jaguar were to lose such designation or not receive such designation but its application as a new animal drug is found to be a new chemical entity that meets the criteria described by the FDA, Jaguar would be entitled to a five-year marketing exclusivity. In order to receive this five-year exclusivity, the FDA would have to find in its approval of Jaguar's application that Jaguar's NADA contains an API not previously approved in another application, that the application itself is an original application, not a supplemental application, and that Jaguar's application included the following studies: one or more investigations to demonstrate substantial evidence of effectiveness of the drug for which Jaguar is seeking approval; animal safety studies and human food safety studies (where applicable). If the NADA is seeking approval of a drug for which Jaguar has received conditional approval, Jaguar, upon approval would still be entitled to a five-year marketing exclusivity provided it meets the criteria as set forth above. If however, Jaguar's NADA is for a drug for which the FDA has determined that the drug contains an API that has previously been approved, regardless of whether the original approval was for use in humans or not, Jaguar may only be entitled to a three-year marketing exclusivity provided that the NADA is an original, not supplemental, application and contains both safety and efficacy studies demonstrating the safety and efficacy of the drug which is the subject of the application. Jaguar has received MUMS designation for Canalevia for the indication of Chemotherapy-Induced Diarrhea, or CID, in dogs. Additionally, Jaguar has submitted a formal request to the U.S. Food & Drug Administration's Center for Veterinary Medicine for a determination about whether Canalevia qualifies as a "minor use", per the requirements of the MUMS Act, for the indication of EID in dogs.

European Union

The European Union, or EU, definition of a veterinary medicinal product closely matches the definition of an animal drug in the United States. In the EU, a company can market a veterinary medicinal product only after a marketing authorization has been issued by an EU member state, (*i.e.*, approval on a country-by-country basis) or by the EU Commission through the European Medicines Agency, or the EMA. Before the EU member state or the EU Commission issues marketing authorization, Jaguar must submit a marketing authorization application, known as the dossier. The dossier includes data from studies showing the product's quality, safety, and efficacy and is similar to an NADA filed with the FDA.

For an animal drug, the Committee for Medicinal Products for Veterinary Use, or CVMP, is responsible for the scientific evaluation. Experts from all EU member states are on the CVMP. The Rapporteur, or lead reviewer on the dossier, prepares an overview of the committee's scientific evaluation, called the CVMP Assessment Report.

The CVMP Assessment Report:

- summarizes the data submitted by the company on the product's quality, safety, and efficacy;
- explains the assessment done by the CVMP to support the committee's recommendation to the EU Commission to issue a marketing authorization; and
- is the basis for the European Public Assessment Report published on the EMA's website.

Labeling

The FDA plays a significant role in regulating the labeling, advertising and promotion of animal drugs. This is also true of regulatory agencies in the EU and other territories. In addition, advertising and promotion of animal health products is controlled by regulations in many countries. These rules generally restrict advertising and promotion to those claims and uses that have been reviewed and approved by the applicable agency. Jaguar will conduct a review of advertising and promotional

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material for compliance with the local and regional requirements in the markets where it eventually may sell its product candidates.

Jaguar's non-prescription products will be labeled in accordance with the health guidelines outlined by the National Animal Supplements Council, an industry organization that sets industry standards for certain non-prescription animal products, including but not limited to product labeling.

Other Regulatory Considerations

Jaguar believes regulatory rules relating to human food safety, food additives, or drug residues in food will not apply to the products it currently is developing because its prescription drug product candidates are not intended for use in production animals, with the exception of horses, which qualify as food animals in Europe and Canada; and its non-prescription products are not regulated by section 201(g) of the Federal Food, Drug, and Cosmetic Act, which the FDA is authorized to administer.

Jaguar's prescription drug product candidates currently in development, if approved, may eventually face generic competition in the United States and in the EU after the period of exclusivity has expired. In the United States, a generic animal drug may be approved pursuant to an abbreviated new animal drug application, or ANADA. With an ANADA, a generic applicant is not subject to the submission of new clinical and safety data but instead must only show that the proposed generic product is a copy of the novel drug product, and bioequivalent to the approved novel product. However, if Jaguar's product candidates are the first approved by the FDA or the EMA as applicable for use in animals, they will be eligible for a five-year marketing exclusivity in the United States and 10 years in the EU thereby prohibiting generic entry into the market. If the product has MUMS designation it has a seven-year marketing exclusivity.

Jaguar does not believe that its non-prescription products are currently subject to regulation in the United States. The FDA's Center for Veterinary Medicine only regulates those animal supplements that fall within the FDA's definition of an animal drug, food or feed additive. The Federal Food Drug and Cosmetic Act defines food as "articles used for food or drink for man or other animals and articles used as components of any such article." Animal foods are not subject to pre-market approval and are designed to provide a nutritive purpose to the animals that receive them. Feed additives are defined as those articles that are added to an animal's feed or water as illustrated by the guidance documents. Jaguar's non-prescription products are not added to food, are not ingredients in food nor are they added to any animal's drinking water. Therefore, Jaguar's non-prescription products do not fall within the definition of a food or feed additive. The FDA seeks to regulate such supplements as food or food additives depending on the intended use of the product. The intended use is demonstrated by how the article is included in a food, or added to the animals' intake (*i.e.,* through its drinking water). If the intended use of the product does not fall within the proscribed use making the product a food, it cannot be regulated as a food. There is no intent to make Jaguar's non-prescription products a component of an animal food, either directly or indirectly. A feed additive is a product that is added to a feed for any reason including the top dressing of an already prepared feed. Some additives, such as certain forage, are deemed to be Generally Recognized as Safe, or GRAS, and therefore, not subject to a feed Additive Petition approval prior to use. However, the substances deemed GRAS are generally those that are recognized as providing nutrients as a food does. Jaguar does not believe that its non-prescription products fit within this framework either. Finally, a new animal drug refers to drugs intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in animals. Jaguar's non-prescription products are not intended to diagnose, cure, mitigate, treat or prevent disease and therefore, do not fit within the definition of an animal drug. Its non-prescription products are intended to support a healthy gut, support fluid retention, and normalize stool formation in animals suffering from scours. Additionally, because a previously marketed human formulation of the botanical extract in Jaguar's non-prescription products was considered a dietary supplement subject to the

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Dietary Supplement Health and Education Act of 1994 (and not regulated as a drug by the FDA), Jaguar does not believe that the FDA would regulate the animal formulation used in Jaguar's non-prescription products in a different manner. Jaguar does not believe that its non-prescription products fit the definition of an animal drug, food or food additive and therefore are not regulated by the FDA at this time.

In addition to the foregoing, Jaguar may be subject to state, federal and foreign healthcare and/or veterinary medicine laws, including but not limited to anti-kickback laws, as Jaguar may from time to time enter consulting and other financial arrangements with veterinarians, who may prescribe or recommend Jaguar's products. If Jaguar's financial relationships with veterinarians are found to be in violation of such laws that apply to Jaguar, Jaguar may be subject to penalties.

Employees

As of December 31, 2016, Jaguar had 23 employees. Of Jaguar's employees, eight hold D.V.M. or Ph.D. degrees and fifteen of its employees are engaged in research and development activities. None of Jaguar's employees are represented by labor unions or covered by collective bargaining agreements.

Description of Properties

Jaguar's corporate headquarters are located in San Francisco, California, where Jaguar subleases 6,008 rentable square feet of office space from SeeChange Health Management Company, Inc. Jaguar's sublease agreement expires on August 31, 2018. Jaguar believes that its existing facilities are adequate for its near-term needs. Jaguar believes that suitable additional or alternative space would be available if required in the future on commercially reasonable terms if Jaguar is not able to convert its current sublease to a lease by August 31, 2018 on commercially reasonable terms.

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NAPO BUSINESS

Overview

Napo Pharmaceuticals, Inc. ("Napo") focuses on the development and commercialization of proprietary pharmaceuticals for the global marketplace from plants traditionally used in rainforest areas. In May 2016, the New Drug Application (NDA) and commercial rights for human applications of crofelemer (Mytesi) previously licensed to Salix Pharmaceuticals, Inc. ("Salix") were transferred to Napo. In October 2016 Napo launched Mytesi (formerly known as Fulyzaq), a human drug approved by the U.S. FDA for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy (ART). The active pharmaceutical ingredient (API) in Mytesi is crofelemer, Napo's proprietary, patented gastrointestinal anti-secretory agent sustainably harvested from the rainforest.

According to the World Health Organization, there are nearly 1.7 billion cases of diarrheal disease globally every year. Although not all types of diarrhea are secretory in nature, Napo views the current, initial approval of Mytesi as the opening of the door to an important pipeline demonstrating approval by the FDA of the Chemistry, Manufacturing and Controls (CMC) for this natural product, as well as acknowledgement by the FDA of the safety of the product for chronic use for the approved indication. Napo is continuing development of Mytesi for other antidiarrheal indications, with investigational studies completed in irritable bowel syndrome, cholera, traveler's diarrhea, and in pediatric patients, and two investigator-initiated trials in chemotherapy-induced diarrhea, one of which is currently enrolling patients. Diarrhea is a common adverse event seen with chemotherapy agents typically used in breast and colon cancers, and in particular in the more recently introduced therapeutic classes of epidermal growth factor receptor (EGFR) monoclonal antibodies and tyrosine kinase inhibitors (TKI) often used for chronic management of cancer. The increased need for and use of these agents has made diarrhea one of the most disabling issues for cancer patients. Crofelemer offers the potential for an appropriate mechanism of action against these likely secretory diarrheas and has prompted interest among physicians concerned about this diarrheal symptom, stimulating the aforementioned investigator-initiated trials.

Napo is seeking partnerships outside the United States for the above indications, while focusing on development, and commercial access in the United States directly. Napo is also focused on investigating SB-300 for various gastrointestinal indications. SB-300 is a distinct and proprietary Napo pharmaceutical formulation of a standardized botanical extract, also sustainably derived from the *Croton lechleri* tree.

Napo believes SB-300, which has the same mechanism of action as crofelemer and is less costly to produce, may support efforts to receive a priority review voucher from the U.S. FDA for a cholera indication. Priority review vouchers are granted by the FDA to drug developers as an incentive to develop treatments for neglected diseases and rare pediatric diseases. Additionally, Napo believes SB-300 represents a long-term pipeline opportunity as a second-generation anti-secretory agent, on a global basis, for diarrheal illnesses such as cholera especially in resource-constrained countries where cost of goods is a factor, in part, because requirements often exist in such regions for drug prices to decrease annually.

Napo's portfolio development strategy is based on identifying indications that are potentially high-value because they address important medical needs that are significantly or globally unmet, and then strategically sequencing indication development priorities, second-generation product pipeline development, and partnering goals on a global basis.

Napo's technology for proprietary gastrointestinal disease products is central to both Napo and Jaguar. Crofelemer is also the API in Canalevia, Jaguar's lead prescription drug product candidate, intended for the treatment of various forms of diarrhea in dogs. Jaguar is planning a multi-site pilot

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study of Canalevia in dogs with malignancies treated with toceranib phosphate, another TKI, with diarrhea as a frequent adverse effect. Jaguar and Napo expect that a merger of the two companies would play a significant and positive role in supporting the development of crofelemer to address the problem of chemotherapy-induced diarrhea in both humans and companion animals.

As Napo announced on February 28, 2017, it recently signed an agreement with Alamo Pharma Services, Inc. for the establishment and management of a national sales team for Mytesi in the second quarter, 2017, and Napo is deploying a sampling program for Mytesi so patients can start therapy immediately. Under the terms of the agreement, Alamo will provide a team of shared sales representatives to supplement the dedicated Napo representatives who will promote and sample Mytesi in key metropolitan areas throughout the United States. The sales representatives will reach out to doctors who have large populations of HIV patients and, therefore, are high-volume prescribers of antiretroviral therapies.

Napo and Jaguar estimate the potential U.S. market for Mytesi to be approximately $100 million in gross annual sales, and forecast that Mytesi will generate approximately $7.0 million in net sales in 2017, with the greatest impact on prescription growth coincident with the deployment of the sales force and sampling program.

Napo's management team has significant experience in gastrointestinal product development. This experience includes the development of crofelemer for human use, from discovery and preclinical and clinical toxicity studies, including the existing animal studies to be used by Jaguar for Canalevia regulatory approvals, through human clinical development and commercial manufacturing and supply.

Mytesi Clinical Data

Mytesi has been clinically proven to have:

- Minimal absorption, with plasma concentrations below the level of detection
- No clinically relevant drug-drug interactions
- No effect on viral load or CD4 counts
- Adverse events comparable to those with placebo

The efficacy of Mytesi 125-mg delayed-release tablets twice daily was evaluated in a randomized, double-blind, placebo-controlled (1 month) and placebo-free (5 month), multicenter study (the ADVENT trial). The study enrolled HIV-positive patients on stable ART with a history of diarrhea for 1 month or more. In the Mytesi 125-mg twice-daily group, a significantly larger proportion of patients achieved a reduction in watery stools per week vs placebo 18% vs 8%, $P<0.01$.

By week 4 of the study, 78% of patients in the Mytesi BID group experienced a decrease in watery stools. Among these patients that experienced a decrease, 61% had at least a 50% decrease in watery stools. By week 20, 89% of patients in the Mytesi BID group experienced a decrease in watery stools. Among these patients that experienced a decrease, 83% had at least a 50% decrease in watery stools, and over half of patients had no watery stools at all (100% decrease).

Important Safety Information About Mytesi

Mytesi (crofelemer 125mg delayed-release tablets) is an antidiarrheal indicated for the symptomatic relief of noninfectious diarrhea in adult patients with HIV/AIDS on antiretroviral therapy (ART). Mytesi is not indicated for the treatment of infectious diarrhea. Rule out infectious etiologies of diarrhea before starting Mytesi. If infectious etiologies are not considered, there is a risk that patients with infectious etiologies will not receive the appropriate therapy and their disease may worsen. In clinical studies, the most common adverse reactions occurring at a rate greater than placebo were

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upper respiratory tract infection (5.7%), bronchitis (3.9%), cough (3.5%), flatulence (3.1%), and increased bilirubin (3.1%).

Product Pipeline

Napo is developing a pipeline of prescription drug product candidates to address unmet needs in gastrointestinal health. Napo's pipeline currently includes prescription drug product candidates for 7 follow-on indications, several of which are backed by strong Phase 2 evidence from completed Phase 2 trials.

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Prescription Drug Product Candidates

Product Candidates	Indication	Completed Milestones	Current Phase of Development	Anticipated Near-Term Milestones
Formulation of crofelemer	Chemotherapy-induced diarrhea (CID)		Phase 2	
		Two investigator-initiated clinical trials funded by Genentech, Roche & Puma		Special Protocol Assessment (SPA) discussion
Formulation of crofelemer	Institutional diarrhea		Phase 2	
		Safety		Protocol discussion with FDA
Formulation of crofelemer	Secretory diarrhea		Phase 2	
		Safety		Support for Institutional diarrhea protocol
		Multiple Phase 2 studies completed		
Formulation of crofelemer	Irritable Bowel Syndrome diarrhea predominant (IBS-D)		Phase 2	
		Phase I study		Partner discussions
		Two significant Phase 2 studies completed		
Formulation of crofelemer	Pediatric general watery diarrhea		Phase 2	
		Phase I study		Formulation optimization
Formulation of crofelemer	Cholera/general watery diarrhea		Phase 2	
		Published trial in cholera patients		
Formulation of crofelemer	Orphan Drug (Channelopathies)		Phase 2	
		Phase I study		Proof-of-Concept 2017
				File for Orphan drug status and development plan with FDA for Channelopathies
SB-300	Second-generation anti-secretory agent for multiple indications including cholera/general watery diarrhea		Pre IND	
		Animal and human studies in secretory diarrheas; successful cholera trial design for anti-secretory mechanism of action;		CMC development for SB-300 & Pre-clinical

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The following diagram illustrates the mechanism of action of Napo's gastrointestinal drug products and drug product candidates, which normalize chloride and water flow and transit time of fluids within the intestinal lumen.

Business Strategy

Napo's goal is to become a leading gastrointestinal health company with first-in-class products that address unmet medical needs in the global gastrointestinal market. To accomplish this goal, Napo plans to:

Leverage Napo's significant gastrointestinal knowledge, experience and intellectual property portfolio to develop a follow-on line of crofelemer and anti-secretory based products.

Napo's management team collectively has more than 100 years of experience in the development of gastrointestinal prescription drug and non-prescription products. This experience covers all aspects of product development, including discovery, preclinical and clinical development and regulatory strategy.

Establish commercial capabilities, including third-party sales and distribution networks and Napo's own targeted commercial efforts.

As Napo announced on February 28, 2017, it recently signed an agreement with Alamo Pharma Services, Inc. for the establishment and management of a national sales team for Mytesi. Under the terms of the agreement, Alamo will provide a team of shared sales representatives to supplement the dedicated Napo representatives who will promote and sample Mytesi in key metropolitan areas throughout the United States. The sales representatives will reach out to doctors who have large populations of HIV patients and, therefore, are high-volume prescribers of antiretroviral therapies.

Alamo is a specialized provider of contract sales solutions to pharmaceutical and biotech companies headquartered in Doylestown, Pennsylvania. BexR, a full service kitting and pick pack sample fulfillment provider, will continue to offer telesales support for Mytesi, as BexR has since October 2016, to detail HIV healthcare providers in geographic areas not covered by sales representatives. Alamo and BexR are part of the Mission Family of Companies.

Napo believes that the establishment of an experienced pharmaceutical field sales team for Mytesi, supported by a telesales team, will allow Napo to reach many high-potential prescribers. Napo is also deploying a sampling program for Mytesi so patients can start therapy immediately. Based on its market research findings, Napo believes the key difference between current Mytesi prescribers and non-prescribers is awareness most have simply never heard about the product. Patient and prescriber surveys show that 1 in 5 HIV+ patients suffer from diarrhea.

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Napo and Jaguar estimate the potential U.S. market for Mytesi to be approximately $100 million in gross annual sales, and forecast that Mytesi will generate approximately $7.0 million in net sales in 2017, with the greatest impact on prescription growth coincident with the deployment of the sales force and sampling program.

Napo and Jaguar believe the medical need for Mytesi is significant, compelling, and unmet, and that patients are looking for something that works differently than the options currently available to resolve diarrhea. Clinical trials demonstrated that nearly 80 percent of Mytesi users experienced an improvement in their diarrhea over a four-week period. Initiation on a new antiretroviral therapy has been shown to causes diarrhea 15% of the time. Greater than 50% of the U.S. HIV population is aging, and living with the HIV virus in their gut for 10-plus years, causing chronic diarrhea.

Napo and Jaguar believe that, upon effectiveness of the merger, the two companies together are poised to realize a number of synergistic, value-adding benefits and an expanded pipeline of potential blockbuster human follow-on indications, a second generation anti-secretory agent, as well as a pipeline of important animal follow-on indications for Mytesi, upon which to build global partnerships.

Launch Napo's product candidates, if approved, leveraging the commercial capabilities and brand awareness Napo is currently building.

Napo's pipeline currently includes prescription drug product candidates for 7 follow-on indications, several of which are backed by strong Phase 2 evidence from completed Phase 2 trials.

Expand to international markets.

As Napo works to expand its commercialization efforts, it is looking to leverage its global rights to Mytesi by seeking geographical collaboration outside the United States to develop and commercialize the drug worldwide, while Napo remains focused on and in control of the U.S. market.

Napo's portfolio development strategy is based on identifying indications that are potentially high-value because they address important medical needs that are significantly or globally unmet, and then strategically sequencing indication development priorities, second-generation product pipeline development, and partnering goals on a global basis.

Certain markets have strong international synergies benefiting market awareness and demand. Napo may also enter into partnerships that include payment of upfront licensing fees for its products and product candidates for markets outside the United States where appropriate.

Products in Development

Chemotherapy-induced Diarrhea (CID)

CID is a common problem with a relevant mechanism for crofelemer.

National Cancer Institute Criteria for Grading Severity of Diarrhea

	Grade 1	Grade 2	Grade 3	Grade 4
Patients without a colostomy	Increase of <4 stools per day over pretreatment	Increase of 4 to 6 stools per day or nocturnal stools	Increase of ≥7 stools per day or incontinence; need for parenteral support for hydration	Physiologic consequences requiring intensive care; hemodynamic collapse

According to data appearing in "Treatment Guidelines for CID" in the April 2004 issue of *Gastroenterology and Endoscopy News*, diarrhea is the most common adverse event reported in

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chemotherapy patients. Napo is continuing development of Mytesi for this important and unmet medical need, and two planned investigator-initiated trials of the product are underway in breast cancer patients suffering from CID.

Diarrhea is a common adverse event seen with chemotherapy agents in the therapeutic classes of epidermal growth factor receptor (EGFR) tyrosine kinase inhibitors (TKI's) and EGFR monoclonal antibodies (for breast, lung, and other malignancies). The increased need for and use of these agents has made diarrhea one of the most disabling issues for cancer patients. Crofelemer offers the potential for an appropriate mechanism of action against this likely secretory diarrhea and has prompted interest among physicians concerned about this diarrheal symptom, stimulating the aforementioned investigator-initiated trials. Diarrhea is also a common adverse event seen with chemotherapy agents used in colorectal and gastric cancers, and chronic maintenance chemotherapy. There are currently no anti-diarrhea agents approved generally for chemo-therapy induced diarrhea. The FDA recently approved XERMELO (telotristat ethyl, a tryptophan hydroxylase inhibitor) tablets in combination with somatostatin analog (SSA) therapy for the narrow indications of treatment of adults with carcinoid syndrome diarrhea that SSA therapy alone has inadequately controlled.

Clinical Studies

A study titled *HALT-D: DiarrHeA Prevention and ProphyLaxis with Crofelemer in HER2 Positive Breast Cancer Patients Receiving Trastuzumab, Pertuzumab, and Docetaxel or Paclitaxel with or without Carboplatin* is currently underway in conjunction with Georgetown University. The primary objective of the study is to characterize the incidence and severity of diarrhea in patients receiving investigational therapy in the setting of prophylactic anti-diarrheal management.

A second study, titled *An open label study to characterize the incidence and severity of diarrhea in patients with early stage HER2+ breast cancer treated with adjuvant trastuzumab and neratinib followed by neratinib monotherapy, and intensive anti-diarrhea prophylaxis*, is currently underway in conjunction with the University of California at San Francisco. The study is designed to evaluate crofelemer as a salvage anti-diarrheal therapy used with the investigational breast cancer agent neratinib. The primary objective is to characterize the incidence and severity of diarrhea in patients with early stage breast cancer receiving adjuvant trastuzumab and neratinib followed by 1 year of neratinib monotherapy in the setting of prophylactic anti-diarrheal management. The secondary objectives are to evaluate the activity of crofelemer as a rescue anti-diarrheal medication; to assess neratinib adherence, holds, delays, and early discontinuation throughout the course of study therapy. which includes patients receiving neratinib for >1 year; and to assess overall toxicity including constipation and cardiac toxicity with concomitant neratinib and trastuzumab.

Institutional Diarrhea

Patients in medical institutions such as hospitals often experience diarrhea following infection with *Clostridium difficile*, an anaerobic bacillus shed in feces. According to the Centers for Disease Control and Prevention of the U.S. Department of Health & Human Services, any surface, device, or material (e.g., commodes, bathing tubs, and electronic rectal thermometers) that becomes contaminated with feces may serve as a reservoir for the *C. difficile* spores, which are transferred to patients mainly via the hands of healthcare personnel who have touched a contaminated surface or item. Napo believes development of an approved formulation of crofelemer for use in *C. difficile* has the potential to help patients infected with *C. difficile* leave the hospital sooner, help keep patients infected with *C. difficile* out of the hospital, and aid in controlling *C. difficile* contagion in institutional settings, which would also represent a significant economic benefit.

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Clinical Study

Napo has completed safety studies with crofelemer, and a development plan for Phase 2 and pivotal studies is expected to be put in place in 2018-2019. Napo plans to meet with FDA regarding the design of trials that may enroll just *C. difficile* patients or trials that would enroll any patient experiencing severe diarrhea in a medical institution where infection with *C. difficile* is common.

Secretory Diarrhea

Secretory diarrhea occurs when the intestine does not complete absorption of electrolytes and water from luminal contents. This can happen when a nonabsorbable, osmotically active substance is ingested ("osmotic diarrhea") or when electrolyte absorption is impaired ("secretory diarrhea"). Most cases of acute and chronic diarrhea are due to the latter mechanism. Secretory diarrhea can result from bacterial toxins, luminal secretagogues (such as bile acids or laxatives), reduced absorptive surface area caused by disease or resection, circulating secretagogues (such as various hormones, drugs, and poisons), and medical problems that compromise regulation of intestinal function. These studies support the normalizing aspect of the mechanism of action, regardless of the cause of the diarrhea, and are supportive of the high-valued economic setting in institutionalized diarrhea described above.

Clinical Study

Napo has completed safety studies and multiple Phase 2 studies for secretory diarrhea as well diarrhea predominant irritable bowl syndrome as detailed below.

Completed Study Travelers' Diarrhea

Phase 2 a study of crofelemer in 184 persons in a double-blind, placebo-controlled study for the symptomatic treatment of acute diarrhea among travelers to Jamaica and Mexico.

The study was designed to evaluate the effectiveness of crofelemer in the treatment of travelers' diarrhea.

A total of 184 persons from the United States who acquired diarrhea in Jamaica or Mexico were enrolled in a double-blind, placebo-controlled study examining the effectiveness of three doses of crofelemer in reducing illness. Subjects were treated with 125 mg, 250 mg, or 500 mg crofelemer or a matching placebo four times a day for 2 days. Subjects kept daily diaries of symptoms and were seen each day for 3 days. Of the subjects, 169 (92%) were included in the efficacy analysis.

The most common etiological agent identified was enterotoxigenic Escherichia coli, found in 19% of subjects. The mean time interval from taking the first dose of medication until passage of the last unformed stool during 48 h therapy (TLUS48) was 38.7 h for the placebo group.

TLUS48 was shortened by crofelemer:
30.6 h for the 125-mg dose group ($p = 0.005$);
30.3 h for the 250-mg group; and
32.6 h for the 500-mg group ($p = 0.01$).

Treatment failures were seen in 29.3% in the placebo group compared with 7.3% ($p = 0.01$), 4.3 ($p = 0.002$), and 9.8 ($p = 0.026$) in the three treatment groups. Crofelemer was well tolerated at all doses.

The study provided statistically significant results of crofelemer use for shortening the duration of travelers' diarrhea. This antisecretory approach works directly against the pathophysiology of travelers' diarrhea and is not likely to potentiate invasive forms of diarrhea or to produce posttreatment constipation.

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Completed Study Cholera

Phase 2 study of crofelemer in the treatment acute, severely dehydrating watery diarrhea with confirmed cholera with the use of an antibiotic (azithromycin) and oral rehydration therapy in 100 adult patients between 18 and 55 in Bangladesh.

After a four-hour period of rapid rehydration therapy, patients were randomized 1:2:2 to placebo or 125 mg or 250 mg oral dose of crofelemer. Crofelemer of placebo doses were administered about one hour after the oral administration of azithromycin (1 gm dose). The primary objective was to evaluate the safety and effects of crofelemer on reducing the watery stool output normalized to body weight (mL/kg) in the first 24 hours on the background of azithromycin and rehydration therapy. Crofelemer was well tolerated and there were no drug related adverse events in the study.

Results: Both doses of crofelemer produced approximately 25-30% reduction in median watery stool volumes in the 0-6 and 0-12 hour period following initiation of therapy. Crofelemer showed a strong trend in the reduction of watery stool output in the 0-6 hour and 0-12 hour intervals (p=0.07). Upon exclusion of three outlier patients, the crofelemer dose of 125 mg produced a statistically significant reduction in the normalized stool output (p=0.028) and the dose of 250 mg crofelemer showed a strong trend for reduction of watery stool output (p=0.07).

Irritable Bowel Syndrome diarrhea predominant (IBS-D)

Diarrhea is a common symptom of irritable bowel syndrome (IBS), a frustrating, underdiagnosed and undertreated condition. IBS-D is a subtype characterized mainly by loose or watery stools at least 25 percent of the time. According to the U.S. FDA, studies estimate that IBS affects 10 to 15 percent of adults in the United States.

Abdominal pain is the key symptom of IBS, and the pain, which is associated with a change in stool frequency or consistency, can be severe. To improve the diagnosis and outcomes for IBS patients and to update clinicians on the latest research, Dr. William Chey, a gastroenterologist and professor of medicine and nutrition sciences at the University of Michigan, along with an international team of collaborators, compiled *Rome IV*, a updated compendium of diagnostic criteria on functional GI disorders such IBS. *Rome IV* contains a chapter titled Centrally Mediated Disorders of Gastrointestinal Pain.

Although new agents for IBS-D have come on the market,, there is an unmet medical for long-term, safe management of the abdominal pain associated with IBS-D. Mytesi has been demonstrated to be safe for chronic use, and two studies provide statistically significant results of crofelemer use for abdominal pain in women.

The largest group of IBS sufferers are those with the subtype referred to as IBS-M (mixed diarrhea and constipation). IBS-M is also referred to as IBS-A, because the condition often involves frequent alternating between IBS-D and IBS-C (constipation predominant). IBS-M is distressing for patients as well as difficult to diagnose and manage, and is often associated with pain and urgency as well as significant abdominal distension and bloating. No approved drugs currently exist for IBS-M. Leading gastroenterologists have stated that IBS-C drugs may cause diarrhea in an IBS-M patient, and an IBS-D drug may cause significant constipation. Napo therefore believes an opportunity exists for an IBS-M indication for Mytesi. Resultingly, and due to the demonstrated safety of Mytesi for chronic use and its demonstrated benefit for abdominal pain in women, Napo is considering expanding development efforts to evaluate the IBS-M indication.

Clinical Study

Crofelemer has been tested in safety studies and two significant Phase 2 studies for IBS-D as detailed below. Napo recognizes that patients suffering from IBS-D or IBS-M may require a

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polypharmacetuical approach to their lifetime management of the disease, and is therefore working to develop a low risk study designed to optimize efforts to develop an approved formulation to address these unmet medical needs.

Completed Studies IBS-D

Phase 2a a randomized double-blind placebo-controlled, dose-ranging (placebo, 125 mg, 250 mg, and 500 mg bid) study over a 12-week treatment period in 246 patients with d-IBS (Rome II criteria), including both males and females, whose average age was 50 years old.

n=245 subjects
61 placebo
62 125 mg crofelemer BID
59 250 mg crofelemer BID
62 500 mg crofelemer BID

IBS symptoms (pain, urgency, stool frequency and consistency, and adequate relief) were self-reported by the patients via an interactive voice response system. Patients needed to exhibit active disease during the two-week baseline period as defined by a mean daily stool frequency greater than or equal to 2/day, pain score greater than or equal to 1 and stool consistency greater than or equal to 3 (5-point Lickert scale for pain and consistency) to be enrolled. Patients received treatment for 12 weeks followed by a two-week treatment free period.

Results: The 125mg bid of crofelemer exhibited a consistent response during each month among most efficacy endpoints in women with d-IBS reaching statistical significance ($p<0.05$) for pain.

Crofelemer had little effect on the stool consistency score, though there was a trend toward reduced stool frequency.

Treatment benefits were not apparent in men, although relatively few men enrolled in the trial (13-16/group).

As with previous trials of crofelemer, no drug-related serious adverse events were reported. Adverse event rates were similar across all dose groups, although in the two highest doses (250 and 500 mg bid) there were a higher percentage of dropouts. There were no drug-related or dose-related differences in constipation. During the two-week treatment-free follow-up period symptoms approached baseline levels.

Endpoint Results:

p-value (difference from Placebo) Pain score 0.42* 0.02 Frequency 0.7 0.13 (stools/day) Consistency Score 0.03 0.70 Urgency Free days +11.2% 0.20 Adequate Relief +16% 0.43 (1) Month 3 results (end of the three month treatment period); observed case analysis with disease outliers (mean baseline frequency >9 stools/day) removed from all groups.

A supplementary analysis of stool consistency and abdominal pain showed positive results. Responders were subjects who had stool consistency score of a≥ 4 for < 25% of days in a given week and ≥ 30% improvement in abdominal pain scores a given week (ie, Rome Foundation-defined stool consistency and abdominal pain responders).

In this analysis, Rome Foundation-defined stool consistency and abdominal pain responders were significantly more likely during the entire 3 months in the 125mg BID group when compared with placebo (24.5% versus 13.1%, p = 0.0399) and there was a statistical trend in favor of crofelemer 125 mg BID during months 1 through 2 (27.4% versus 16.4%, p = 0.0640). Similar positive effects of crofelemer 125 mg BID were observed in female subjects (n = 183).

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Safety: Crofelemer at doses of 125, 250 and 500 mg had a safety profile that was generally similar to placebo among men and women with d-IBS.

Phase 2 A Randomized, double-blind, placebo-controlled study to assess the safety and efficacy of crofelemer for the symptomatic treatment of diarrhea predominant irritable bowel syndrome (d-IBS) in 240 female subjects 18 years or older with active d-IBS according to the Rome II criteria for the diagnosis of d-IBS.

The study consisted of a 2-week screening period and a 12-week blinded treatment period followed by a 4-week treatment-free follow-up period. During the 12-week treatment period 240 subjects were given 125 mg of crofelemer BID or placebo BID and recorded daily assessments of their IBS symptoms in the interactive voice response system.

The primary endpoint was the change from baseline for overall percentage of abdominal pain/discomfort free days (PFDs). On a daily basis, respondents recorded the intensity of their abdominal pain/discomfort for that day using the 5-pint Likert scale: 0=none, 1=mild, 2=moderate, 3=intense, 4=severe. Any day that a score of zero (0) was recorded was considered a PFD. Secondary efficacy endpoints included: overall percentage of PFDs; and:

- weekly and monthly percentage of PFDs and change from baseline;
- weekly and monthly average abdominal pain/discomfort scores and change from baseline (scale 0 = none; 1= mild; 2 = moderate; 3 = intense; and 4 = severe)
- weekly and monthly average daily stool consistency (Scale: 1= very hard; 2= hard; 3 = formed; 4 = loose; 5 = watery)
- weekly and monthly average daily stool frequency
- weekly and monthly average daily urgency: percentage of days with presence of urgency
- adequate relief of IBS symptoms: weekly, monthly and overall

Stool consistency and abdominal pain endpoints were analyzed using definitions of symptom improvement from a recent FDA guidance on IBS endpoints (March 2010) and recommendations of the Rome Foundation (letter dated 28 June 2010) concerning the IBS endpoints described in this guidance. The following endpoints were evaluated:

- FDA-defined stool consistency and abdominal pain: weekly average stool consistency score < 4 (4=loose stool) and ≥ 30% improvement in abdominal pain scores a given week;
- FDA-defined stool consistency: weekly average stool consistency score ≤ 4.
- FDA-defined abdominal pain: ≥ 30% improvement in abdominal pain scores a given week
- Rome Foundation-defined stool consistency and abdominal pain: < 25% of days in a given week with stool consistency score of ≥ 4 and ≥ 30% improvement in abdominal pain scores a given week. The Rome Foundation stool consistency definition was a change recommended by the Rome Foundation to the FDA stool consistency definition (letter dated 28 June 2010).

Results: The overall increase in pain-free days (protocol-specified primary endpoint) for subjects in the crofelemer group was not statistically significant when compared with subjects in the placebo group (p = 0.5107)

A supplementary analysis of abdominal pain showed positive results. Responders were subjects who had ≥ 30% improvement in abdominal pain scores a given week (ie, FDA-defined abdominal pain responders; this definition of abdominal pain responders was presented in the March 2010 guidance on IBS endpoints).

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In this analysis, abdominal pain responders were significantly more likely during Months 1 through 2 (58.3% versus 45.0%, p = 0.0303) and during the entire 3 months (54.2% versus 42.5%, p = 0.0371) in the crofelemer group when compared to placebo.

Safety: The overall safety profile for crofelemer 125 mg BID for 12 weeks was comparable to that observed with placebo and was consistent with the IBS population under study.

Pediatric General Watery Diarrhea

According to the World Health Organization, diarrheal disease is the second leading cause of death in children under five years old, and is responsible for killing around 760,000 children every year. Diarrhea can last several days, and can deplete water and salts the body needs for survival. Most children and adults who die from diarrhea actually die from severe dehydration and fluid loss. Diarrhea is also a leading cause of malnutrition in children under five years old. Children who are malnourished or have impaired immunity are at high risk of life-threatening diarrhea. Clinical Study

Napo has completed a Phase 1 study in a pediatric population in children as young as 3 months of age for crofelemer as detailed below.

Completed Study Pediatric General Watery Diarrhea

Phase 1 Pediatric Safety Study

Crofelemer was shown to be well tolerated for use in the dose range of 1.0 to 20.0 mg/kg/day in two divided doses in infants as low as 3 months of age with lower respiratory tract infections caused by RSV. No SAEs were observed in the study and the adverse events were mild to moderate in severity and did not require discontinuation of treatment.

Orphan Drug (Channelopathies)

Channelopathies are diseases caused by disturbed function of ion channel subunits or the proteins that regulate the units. These diseases may be either congenital, often resulting from a mutation or mutations in the encoding genes, or acquired, often resulting from autoimmune attack on an ion channel. In regions such as the United Arab Emirates and Saudi Arabia, genetic channelopathies occur with higher incidence as a result of consanguineous marriage.

Clinical Study

Napo has completed safety studies of crofelemer, and a proof-of-concept study is planned for this year. Napo intends to seek orphan drug status from the channelopathies indication. The mission of the FDA Office of Orphan Products Development is to advance the evaluation and development of products (drugs, biologics, devices, or medical foods) that demonstrate promise for the diagnosis and/or treatment of rare diseases or conditions.

Cholera/General Watery Diarrhea

According to the Centers for Disease Control and Prevention of the U.S. Department of Health & Human Services, Cholera is an acute, diarrheal illness caused by infection of the intestine with the bacterium *Vibrio cholerae*. An estimated 3-5 million cases and over 100,000 deaths occur each year around the world. The infection is often mild or without symptoms, but can sometimes be severe. Approximately one in 10 (5-10%) of infected persons will have severe disease characterized by profuse watery diarrhea, vomiting, and leg cramps. In these people, rapid loss of body fluids leads to dehydration and shock. Without treatment, death can occur within hours.

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Napo is investigating SB-300 for the indication of cholera/general watery diarrhea. SB-300 is a distinct and proprietary Napo pharmaceutical formulation of a standardized botanical extract, also sustainably derived from the *Croton lechleri* tree. Napo believes SB-300 represents a long-term pipeline opportunity as a second-generation anti-secretory agent, on a global basis, for diarrheal illnesses such as cholera. Additionally, Napo believes SB-300, which has the same mechanism of action as crofelemer and is less costly to produce, may support efforts to receive a priority review voucher from the U.S. FDA for a cholera indication. Priority review vouchers are granted by the FDA to drug developers as an incentive to develop treatments for neglected diseases and rare pediatric diseases. If approved for this indication, SB-300 could serve as long-term pipeline anti-secretory agent for cholera/general watery diarrhea in geographies where cost of goods is a critical factor, for example, in resource-constrained regions and countries in which a requirement exists for drug prices to decrease annually.

Clinical Study

Napo has initiated CMC and has multiple animal and a human study in secretory diarrheas with SB-300. Napo has also completed a successful trial design for cholera with an anti-secretory mechanism of action.

Other Product Candidates and Development

Given crofelemer's normalizing function in the gut, Napo considers short bowel syndrome (SBS) and ulcerative colitis as additional potential areas for clinical development. SBS is a malabsorption disorder caused by a lack of a functional small intestine. The primary symptom is diarrhea, which can result in dehydration, malnutrition, and weight loss. Ulcerative colitis is a chronic disease of the large intestine, also known as the colon, in which the colon lining becomes inflamed and develops tiny open sores, or ulcers. The combination of inflammation and ulceration can cause abdominal discomfort and frequent emptying of the colon. According to the Crohn's & Colitis Foundation, approximately half of all patients with ulcerative colitis experience mild symptoms, and symptoms include persistent diarrhea accompanied by abdominal pain and blood in the stool.

Manufacturing

The plant material used to manufacture is crude plant latex, or CPL, extracted and purified from *Croton lechleri*, a widespread and naturally regenerating tree in the rainforest that is managed as part of sustainable harvesting programs. The tree is found in several South American countries and has been the focus of long-term sustainable harvesting research and development work. Napo's collaborating suppliers obtain CPL and arrange for the shipment of CPL to Napo's third party contract manufacturer.

Napo's third-party contract manufacturer, Glenmark Pharmaceuticals Ltd. (Glenmark), a research-driven, global, integrated pharmaceutical company, processes CPL into crofelemer utilizing a proprietary manufacturing process. The processing occurs at two FDA-approved Glenmark facilities. Additionally, Napo plans to establish a third processing site, which will be operated by Indena S.p.A., a Milan, Italy-based contract manufacturer dedicated to the identification, development and production of high-quality active principles derived from plants, for use in the pharmaceutical, health food and personal care industries. Indena has completed the required technology transfer and has equipment in place for pilot manufacturing.

Competition

There are several significantly larger pharmaceutical companies competing with Napo in the gastrointestinal segment. These companies include Valeant Pharmaceuticals International, Merck & Co., Inc., and Allergan plc as well as smaller pharmaceutical companies.

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Diarrhea in adult patients living with HIV/AIDs. Napo is not aware of any other FDA-approved drugs for the symptomatic relief of diarrhea in HIV/AIDs patients. HIV/AIDs patients also use loperimide and over the counter anti-diarrheal remedies such as Mylanta or Kaopectate to treat their diarrhea, but these medicines affect motility and can result in rebound diarrhea.

Diarrhea predominant irritable bowel syndrome. Two drugs were approved in 2015 for the treatment of diarrhea predominant irritable bowel syndrome, Allergan plc's Virbezi and Xifaxan which is marketed by Valeant Pharmaceuticals International. Also, Lotronex was approved by the FDA in 2000 but was withdrawn from the market and later reintroduced in 2002 under a Risk Management Program. With the exception of Lotronex, the sponsors of Verbezi and Xifaxan employ extensive media and print promotion for the commercialization of these products. Napo is seeking a partner to further the clinical development and commercialization of crofelemer for d-IBS. There are currently numerous trials on going for d-IBS.

Pediatric diarrhea. Acute diarrhea in children is commonly treated by a change in diet, oral rehydration therapy and/or antibiotics, assuming the cause of the diarrhea is bacterial in nature. Children aged 12 and younger are advised not to use anti-motility drugs (loperamide for example) unless directed to do so by a physician. There are recent clinical trials for probiotics and zinc sulfate. Other recent anti-diarrheal studies in children include a safety and tolerability study of Fidaxomicin for C difficile associated diarrhea.

Chemotherapy induced diarrhea. Napo is not aware of any FDA-approved drugs specifically indicated for chemotherapy induced diarrhea. A recent Phase IIb trial of elsiglutide for the treatment of chemotherapy induced diarrhea in colorectal cancer patients did not meet statistical significance. Opioids and over the counter drugs are commonly used to treat chemotherapy induced diarrhea, but these drugs affect motility. Certain tyrosine-kinase inhibitor chemotherapy agents have diarrhea as a significant side effect.

Institutional diarrhea C. difficile Vancomycin and metronidazole, both antibiotics, are commonly used for the treatment of *C. difficile*. A new drug, Fidaxomicin, introduced in 2015 is particularly active against *C. difficile* and acts by inhibition of RNA synthesis. In October 2016, the FDA approved Merck's Zinplava (bezlotoxumab) which is indicated to reduce recurrence of *C. difficile* infection (CDI) in patients 18 years of age or older who are receiving antibacterial drug treatment of CDI and are at high risk for CDI recurrence. Zinplava is not indicated for the treatment of CDI and should only be used in conjunction with antibacterial drug treatment of CDI. There are ongoing clinical studies of fecal transplant and vaccines for *C. difficile*.

To Napo's knowledge, there are currently no FDA-approved anti-secretory products, in particular which act locally in the gut with the chronic safety profile of crofelemer, in development or on the market. Crofelemer represents a new tool in gastro-intestinal disease management.

Distribution and Marketing Agreements

Napo has agreements in place with BexR, a distributor in Texas and as well as SmartPharma, a marketing and commercialization advisory firm for the distribution, marketing and sale of Mytesi®, its FDA approved drug product for the systematic relief of non-infectious diarrhea in adult patients living with HIV/AIDs on antiretroviral therapy. The agreements compensate these parties with a percentage of net sales, as defined. Payments by Napo to BexR will be a specified percentage of net sales, ranging in the low double digits but in no instance exceeding 20% of net sales, depending on the period in which the sales occur and the amount of such sales. Payments by Napo to SmartPharma will be a specified percentage of net sales, ranging in the low double digits but in no instance exceeding 20% of net sales, depending on the amount of such sales. In addition, under certain circumstances, Napo will

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be required to pay SmartPharma a termination fee equal to a certain percentage of net sales generated within a specified period after the termination date.

Intellectual Property

Proprietary Library of Medicinal Plants

Napo possesses a proprietary library of more than 2,300 library medicinal plants.

Patent Portfolio

Napo owns a portfolio of patents and patent applications covering formulations of and methods of treatment with proanthocyanidin polymers isolated from *Croton* spp or *Calophyllum* spp., including MYTESI (crofelemer), formerly known as FULYZAQ . The patent family related to International Patent publication WO1998/16111 relates to enteric protected formulations of proanthocyanidin polymers isolated from Croton spp or Calophyllum spp., including crofelemer, and methods of treating watery diarrhea using these enteric protected formulation. There are three U.S. patents and a pending U.S. patent application in this family, including, US 7,323,195, which has a term until at least June 7, 2018, US 7,341,744, which has a term until at least January 11, 2018, and US 8,574,634, which has a term until at least January 11, 2018. The United States Patent and Trademark Office (USPTO) issued on December 16, 2006, a notice of recalculation of the patent term adjustment for US 7,341,744 for 842 days, for an expiration date of February 5, 2019; however, the USPTO has not issued a certificate of correction to correct the patent term adjustment accorded to this patent. In addition, on February 20, 2017, Napo has filed a Request for Reconsideration of the patent term adjustment of US 7,341,744, requesting recalculation resulting in 1032 days or, alternatively, 980 days of patent term adjustment. Napo has elected to extend the term of US 7,341,744 under 35 U.S.C. 156, and the United States Patent and Trademark Office has issued a Notice of Final Determination that the patent term extension for US 7,341,744 is 1075 days. Based upon the January 11, 2018 expiration date, the patent would be extended to June 2021, to account for regulatory delay in obtaining human marketing approval for crofelemer. Napo has requested that the USPTO not issue the final Patent Term Extension certificate until final resolution of the number of days of patent term adjustment accorded to US 7,341,744. Patent protection for enteric protected formulations of crofelemer and methods of use has also been obtained outside the United States, including in Europe, Australia, Canada, India, Japan, Korea, Mexico, New Zealand and Taiwan, with terms extending until October 14, 2017 in these jurisdictions. In particular, European patent EP 0 935 417 and Japanese patent no. 4195728 provide protection for enteric protected formulations of in Europe and Japan, respectively, with terms that extend until October 14, 2017.

Napo additional owns a family of patents arising from International Patent Application Publication WO2012058664 that cover methods of treating HIV associated diarrhea and HAART associated diarrhea with proanthocyanidin polymers isolated from *Croton* spp or *Calophyllum* spp., including crofelemer. In the U.S., there are two issued patents, US 8,962,680 and US 9,585,868, both of which expire October 31, 2031 and one pending application. Outside the US, patent protection for methods of treating HIV associated diarrhea has been obtained in Australia, Japan, Kenya, Kazakhstan, Russia, Ukraine, South Africa and Zimbabwe, with expiration dates of October 31, 2031, and Napo has pending applications in Brazil, Canada, China, Europe, Hong Kong, India, Japan, Mexico, and Malaysia. Napo also has patent families related to methods of treating diarrhea-predominant irritable bowel syndrome, constipation-predominant irritable bowel syndrome, and inflammatory bowel disease, familial adenomatous polyposis and colon cancer, with proanthocyanidin polymers isolated from *Croton* spp or *Calophyllum* spp., including crofelemer. In particular, for diarrhea-predominant irritable bowel syndrome, Napo has 1 issued US patent, which expires February 9, 2027, and 1 pending application, issued patents in Australia, Japan, South Korea, Mexico, New Zealand, Singapore, and Taiwan and pending applications in Bangladesh, Bolivia, Canada, Chile, Europe, Gulf States, Mexico, Panama,

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Peru, Paraguay, Thailand, and Taiwan, all of which are estimated to expire April 30, 2027; for constipation-predominant irritable bowel syndrome, Napo has 3 issued US patents, with terms of at least April 30, 2027, patents in Australia, Europe, Mexico, New Zealand, Singapore and pending applications in Canada, and India, all of which are estimated to expire April 30, 2027; and for inflammatory bowel disease, familial adenomatous polyposis and/or colon cancer, Napo has 1 issued US patent, which has an expiration date of October 9, 2029 and 1 pending applications, issued patents in Australia, Europe and a pending applications in Canada, which have estimated expiration dates of April 30, 2027.

Napo also co-owns with Glenmark, issued patents in India, South Africa and Eurasia patents that expire August 24, 2030, and cover a method of manufacturing with proanthocyanidin polymers isolated from *Croton* spp or *Calophyllum* spp., including crofelemer). Napo holds two US patents covering a formulation of NP-500 (nordihydroguiaretic acid (NDGA)) and its use in treating a metabolic disorder that have terms until April 23, 2031 Napo has filed a PCT provisional application for the treatment of Chemotherapy induced diarrhea (CID) with crofelemer.

Trademarks

Mytesi is a registered trademark owned by Napo. Napo plans to market its products under a trademark or trademarks Napo will select and Napo will own all rights, title and interest, including all goodwill, associated with such trademarks.

License Agreements

License Agreement with Jaguar Animal Health, Inc.

On July 11, 2013, Napo entered into an option to license Napo's intellectual property and technology (the "Option Agreement") to Jaguar. Under the Option Agreement, upon the payment of $100,000 in July 2013, Jaguar obtained an option for a period of two years to execute an exclusive worldwide license to Napo's intellectual property and technology to use for its animal health business. The option price was creditable against future license fees to be paid to Napo under the License Agreement (as defined below).

In January 2014, Jaguar exercised its option and entered into a license agreement (the "License Agreement") with Napo for an exclusive worldwide license to Napo's intellectual property and technology to permit Jaguar to develop, formulate, manufacture, market, use, offer for sale, sell, import, export, commercialize and distribute products for veterinary treatment uses and indications for all species of animals. Jaguar was originally obligated to pay a one-time non-refundable license fee of $2,000,000, less the option fee of $100,000. At the Jaguar's option, the license fee could have been paid in common stock. Milestone payments aggregating $3,150,000 may also be due to Napo based on regulatory approvals of various veterinary products. In addition to the milestone payments, Jaguar will owe Napo an 8% royalty on annual net sales of products derived from the Croton lechleri tree, up to $30,000,000 and then, a royalty of 10% on annual net sales of $30,000,000 or more. Additionally, if any other products are developed, Jaguar will owe Napo a 2% royalty on annual net sales of pharmaceutical prescription products that are not derived from Croton lechleri and a 1% royalty on annual net sales of nonprescription products that are not derived from Croton lechleri. The royalty term expires at the longer of 10 years from the first sale of each individual product or when there is no longer a valid patent claim covering any of the products and a competitive product has entered the market. However, because an IPO of at least $10,000,000 was consummated prior to December 31, 2015, the royalty was reduced to 2% of annual net sales of its prescription products derived from Croton lechleri and 1% of net sales of its nonprescription products derived from Croton lechleri and no milestone payment will be due and no royalties will be owed on any additional products developed.

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The License Agreement also transferred to Jaguar certain materials and equipment.

Jaguar has agreed under the License Agreement to defend, indemnify and hold Napo, its affiliates, and the officers, directors, employees, consultants and contractors of Napo harmless from and against any losses, costs, damages, liabilities, fees and expenses arising out of any third-party claim related to the Jaguar's gross negligence, breach of covenants or the manufacture, sale or use of the product or products.

In January 2015, the License Agreement was amended to decrease the one-time non-refundable license fee payable from $2,000,000 to $1,750,000 in exchange for acceleration of the payment of the fee. In 2015, payments totaling $1,225,000 were made, with the balance of $425,000 paid in the quarter ended March 31, 2016.

License Agreement with Glenmark Pharmaceuticals Limited

In 2005 Napo entered into a collaboration agreement with Glenmark Pharmaceuticals Limited (the Glenmark Collaboration Agreement) for the development of crofelemer for the indications of for HIV/ AIDS diarrhea, pediatric diarrhea and adult acute infectious diarrhea in approximately 140 countries outside of the United States, Japan, most EU countries and Japan. The Glenmark Collaboration Agreement provides for royalties to be paid to Napo based upon net sales of crofelemer derived products in the licensed territories. Annual royalty payments will be a specified percentage of net sales, ranging from the high single digits to the low double digits but in no case exceeding 15% of net sales, depending on the annual amount of net sales.

Glenmark has obtained marketing approval for the crofelemer derived product for control and symptomatic relief of diarrhea in patients living with HIV/AIDs in two countries in Africa and two in South America. Two of these four countries have also approved the crofelemer derived product for control and symptomatic relief of diarrhea in patients with acute infectious diarrhea. Napo has not received any royalty income from these approvals nor is it aware of any sales made by Glenmark in its licensed territories.

License Agreement with Luye Pharmaceuticals, Inc.

In 2005, Napo entered into a license agreement with Luye Pharmaceuticals (Luye) for the development of crofelemer for the indications of HIV/AIDS diarrhea, pediatric diarrhea and adult acute infectious diarrhea for the People's Republic of China including Macao and Hong Kong. The license agreement provided for Napo to receive royalties on net sales of crofelemer derived products. Annual royalty payments will be a specified percentage of net sales, ranging from the low single digits to low double digits but in no case exceeding 15% of net sales, depending on the annual amount of net sales. To date, Luye has not developed crofelemer for any indications in its licensed territory and the Company has not received any royalty income from Luye.

License Agreement with Insmed Incorporated

In 2007, Napo entered into a license agreement with Insmed Incorporated (Insmed), pursuant to which Insmed granted Napo a perpetual, world-wide license to use Insmed's patent and other intellectual property rights to Masoprocal in the field of use relating to diabetes, cardiac disease, hypertension, vascular disease, metabolic disease, Syndrome X and all other clinical syndromes related to insulin resistance, but excluding all rights in the field of use to all indications relating to the field of oncology, which were retained by Insmed. Under the terms of the agreement, Napo made an upfront payment to Insmed upon execution of the agreement and will make additional payments to Insmed ranging from the low six figures to $1,000,000 upon the achievement of certain milestones. In addition, Napo is required to make royalty payments to Insmed, which will be a specified percentage of net sales, ranging from the low single digits to high single digits, depending on the annual amount of net sales

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and the geographical location of such sales. Napo's obligation to make royalty payments continues until the longer of (a) the maximum length of time that Masoprocal is protected by a licensed patent and (b) five years from the date upon which Napo receives FDA approval of the new drug application or foreign equivalent for any Masoprocal product or Masoprocal product formulation developed, manufactured and commercialized by or for Napo or Insmed, subject to certain limitations described therein.

Government Regulation

The FDA and comparable regulatory authorities in state and local jurisdictions and in other countries impose substantial and burdensome requirements upon companies involved in the clinical development, manufacture, marketing and distribution of drugs such as those Napo is developing. These agencies and other federal, state and local entities regulate, among other things, the research and development, testing, manufacture, quality control, safety, effectiveness, labeling, storage, record keeping, approval, advertising and promotion, distribution, post-approval monitoring and reporting, sampling and export and import of Napo's product candidates. To comply with the regulatory requirements in each of the jurisdictions in which Napo is seeking to market and subsequently sell its prescription products, Napo is establishing processes and resources to provide oversight of the development, approval processes and launch of its products and to position those products in order to gain market share.

U.S. Government Regulation

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and its implementing regulations.

The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to a variety of administrative or judicial sanctions, such as the FDA's refusal to approve pending NDAs, withdrawal of an approval, imposition of a clinical hold, issuance of warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties.

The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of pre-clinical laboratory tests, animal studies and formulation studies in compliance with the FDA's good laboratory practice, or GLP, regulations;
- submission to the FDA of an investigational new drug application, or IND, which must become effective before human clinical trials may begin;
- approval by an independent institutional review board, or IRB, at each clinical site before each trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with good clinical practice, or GCP, requirements to establish the safety and efficacy of the proposed drug product for each indication;
- submission to the FDA of an NDA;
- satisfactory completion of an FDA advisory committee review, if applicable;

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satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with current good manufacturing practice, or cGMP, requirements and to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity; and

FDA review and approval of the NDA.

Pre-clinical Studies

Pre-clinical studies include laboratory evaluation of product chemistry, toxicity and formulation, as well as animal studies to assess potential safety and efficacy. An IND sponsor must submit the results of the pre-clinical tests, together with manufacturing information, analytical data and any available clinical data or literature, among other things, to the FDA as part of an IND. Some pre-clinical testing may continue even after the IND is submitted. An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions related to one or more proposed clinical trials and places the clinical trial on a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical Trials

Clinical trials involve the administration of the investigational new drug to human subjects under the supervision of qualified investigators in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent in writing for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives or endpoints of the trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. In addition, an IRB at each institution participating in the clinical trial must review and approve the plan for any clinical trial before it commences at that institution. Information about certain clinical trials must be submitted within specific timeframes to the National Institutes of Health, or NIH, for public dissemination on their www.clinicaltrials.gov website.

Human clinical trials are typically conducted in three sequential phases, which may overlap or be combined:

Phase 1: The drug is initially introduced into healthy human subjects or patients with the target disease or condition and tested for safety, dosage tolerance, absorption, metabolism, distribution, excretion and, if possible, to gain an early indication of its effectiveness.

Phase 2: The drug is administered to 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 and optimal dosage.

Phase 3: The drug is administered to an expanded patient population, generally at geographically dispersed clinical trial sites, in well-controlled clinical trials to generate enough data to statistically evaluate the efficacy and safety of the product for approval, to establish the overall risk-benefit profile of the product, and to provide adequate information for the labeling of the product.

Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and more frequently if serious adverse events occur. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, or at all. Furthermore, the FDA or the sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects are being exposed to an unacceptable health risk. Similarly, an IRB can

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suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients.

Special Protocol Assessment

The special protocol assessment, or SPA, process is designed to facilitate the FDA's review and approval of drugs by allowing the FDA to evaluate issues related to the adequacy of certain clinical trials, including Phase 3 clinical trials that are intended to form the primary basis for a drug product's efficacy claim in an NDA. Upon specific request by a clinical trial sponsor, the FDA will evaluate the protocol and respond to a sponsor's questions regarding, among other things, primary efficacy endpoints, trial conduct and data analysis, within 45 days of receipt of the request.

The FDA ultimately assesses whether the protocol design and planned analysis of the trial are acceptable to support regulatory approval of the product candidate with respect to effectiveness of the indication studied. All agreements and disagreements between the FDA and the sponsor regarding an SPA must be clearly documented in an SPA letter or the minutes of a meeting between the sponsor and the FDA.

Even if the FDA agrees to the design, execution and analyses proposed in protocols reviewed under the SPA process, the FDA may revoke or alter its agreement under the following circumstances:

- public health concerns emerge that were unrecognized at the time of the protocol assessment;
- the director of the review division determines that a substantial scientific issue essential to determining safety or efficacy has been identified after testing has begun;
- a sponsor fails to follow a protocol that was agreed upon with the FDA; or
- the relevant data, assumptions, or information provided by the sponsor in a request for SPA change, are found to be false statements or misstatements, or are found to omit relevant facts.

A documented SPA may be modified, and such modification will be deemed binding on the FDA review division, except under the circumstances described above, if FDA and the sponsor agree in writing to modify the protocol and such modification is intended to improve the study.

Marketing Approval

Assuming successful completion of the required clinical testing, the results of the pre-clinical studies and clinical trials, together with detailed information relating to the product's chemistry, manufacture, controls and proposed labeling, among other things, are submitted to the FDA as part of a NDA requesting approval to market the product for one or more indications. In most cases, the submission of a NDA is subject to a substantial application user fee. Under the Prescription Drug User Fee Act, or PDUFA, guidelines that are currently in effect, the FDA has a goal of ten months from the date of "filing" of a standard NDA for a new molecular entity to review and act on the submission. This review typically takes twelve months from the date the NDA is submitted to FDA because the FDA has approximately two months to make a "filing" decision.

In addition, under the Pediatric Research Equity Act of 2003, or PREA, as amended and reauthorized, certain NDAs or supplements to an NDA must contain data that are adequate 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, on its own initiative or at the request of the applicant, grant deferrals for submission of some or all pediatric data until after approval of the product for use in adults, or full or partial waivers from the pediatric data requirements.

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The FDA may also require submission of a risk evaluation and mitigation strategy, or REMS, plan to ensure that the benefits of the drug outweigh its risks. The REMS plan could include medication guides, physician communication plans, assessment plans, and/or elements to assure safe use, such as restricted distribution methods, patient registries, or other risk minimization tools.

The FDA conducts a preliminary review of all NDAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept a NDA for filing. In this event, the application must be resubmitted with the additional information. The resubmitted application is also subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review. The FDA reviews a NDA to determine, among other things, whether the drug is safe and effective and whether the facility in which it is manufactured, processed, packaged or held meets standards designed to assure the product's continued safety, quality and purity.

The FDA may refer an application for a novel drug to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving a NDA, the FDA typically will 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 may inspect one or more clinical trial sites to assure compliance with GCP requirements.

After evaluating the NDA and all related information, including the advisory committee recommendation, if any, and inspection reports regarding the manufacturing facilities and clinical trial sites, the FDA may issue an approval letter, or, in some cases, a complete response letter. A complete response letter generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA and may require additional clinical or pre-clinical testing in order for FDA to reconsider the application. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA will typically issue an approval letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

Even if the FDA approves a product, it may limit the approved indications for use of the product, require that contraindications, warnings or precautions be included in the product labeling, require that post-approval studies, including Phase 4 clinical trials, be conducted to further assess a drug's safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution and use restrictions or other risk management mechanisms under a REMS, which can materially affect the potential market and profitability of the product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements and FDA review and approval.

Post-Approval Requirements

Drugs manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion and

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reporting of adverse experiences with 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.

The FDA may impose a number of post-approval requirements as a condition of approval of an NDA. For example, the FDA may require post-marketing testing, including Phase 4 clinical trials, and surveillance to further assess and monitor the product's safety and effectiveness after commercialization.

In addition, drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and state agencies, and are subject to periodic unannounced inspections by the FDA and these state agencies for compliance with cGMP requirements. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP requirements and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance.

Once an approval is granted, the FDA may withdraw the approval 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 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 mandatory revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition of distribution 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 trials;
- refusal of the FDA to approve pending NDAs or supplements to approved NDAs, or suspension or revocation of product 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 strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Drugs may be promoted only for the approved indications 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, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

Foreign Government Regulation

To the extent that any of Napo's product candidates, once approved, are sold in a foreign country, Napo may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws and implementation of corporate compliance programs and reporting of payments or other transfers of value to healthcare professionals.

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In order to market Napo's future products in the EEA (which is comprised of the 28 Member States of the EU plus Norway, Iceland and Liechtenstein) and many other foreign jurisdictions, a sponsor must obtain separate regulatory approvals. More concretely, in the EEA, medicinal products can only be commercialized after obtaining a Marketing Authorization, or MA. There are two types of marketing authorizations:

- the Community MA, which is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use of the European Medicines Agency, or EMA, and which is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products and medicinal products indicated for the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU; and

- National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a Member State of the EEA, this National MA can be recognized in another Member State through the Mutual Recognition Procedure. If the product has not received a National MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure.

Under the above described procedures, before granting the MA, the EMA or the competent authorities of the Member States of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

In the EEA, new products authorized for marketing, or reference products, qualify for eight years of data exclusivity and an additional two years of market exclusivity upon marketing authorization. The data exclusivity period prevents generic or biosimilar applicants from relying on the pre-clinical and clinical trial data contained in the dossier of the reference product when applying for a generic or biosimilar marketing authorization in the EU during a period of eight years from the date on which the reference product was first authorized in the EU. The market exclusivity period prevents a successful generic or biosimilar applicant from commercializing its product in the EU until 10 years have elapsed from the initial authorization of the reference product in the EU. The 10-year market exclusivity period can be extended to a maximum of eleven years if, during the first eight years of those 10 years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies.

In the EEA, marketing authorization applications for new medicinal products not authorized have to include the results of studies conducted in the pediatric population, in compliance with a pediatric investigation plan, or PIP, agreed with the EMA's Pediatric Committee, or PDCO. The PIP sets out the timing and measures proposed to generate data to support a pediatric indication of the drug for which marketing authorization is being sought. The PDCO can grant a deferral of the obligation to implement some or all of the measures of the PIP until there are sufficient data to demonstrate the efficacy and safety of the product in adults. Further, the obligation to provide pediatric clinical trial data can be waived by the PDCO when these data is not needed or appropriate because the product is likely to be ineffective or unsafe in children, the disease or condition for which the product is intended occurs only in adult populations, or when the product does not represent a significant therapeutic benefit over existing treatments for pediatric patients. Once the marketing authorization is obtained in all Member States of the EU and study results are included in the product information, even when

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negative, the product is eligible for six months' supplementary protection certificate extension. For orphan-designated medicinal products, the 10-year period of market exclusivity is extended to 12 years.

Other U.S. Healthcare Laws

In addition to FDA restrictions on marketing of pharmaceutical and biological products, other U.S. federal and state healthcare regulatory laws restrict business practices in the pharmaceutical industry, which include, but are not limited to, state and federal anti-kickback, false claims, data privacy and security and physician payment and drug pricing transparency laws.

The U.S. federal Anti-Kickback Statute prohibits, among other things, any person or entity from knowingly and willfully offering, paying, soliciting, receiving or providing any remuneration, directly or indirectly, overtly or covertly, to induce or in return for purchasing, leasing, ordering, or arranging for or recommending the purchase, lease, or order of any good, facility, item or service reimbursable, in whole or in part, under Medicare, Medicaid or other federal healthcare programs. The term "remuneration" has been broadly interpreted to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the 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 scrutiny if they do not meet the requirements of a statutory or regulatory 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 U.S. 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 statute has been violated.

Additionally, the intent standard under the U.S. federal Anti-Kickback Statute was amended by the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively, the ACA, to a stricter standard such that a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the ACA codified case law that a claim including items or services resulting from a violation of the U.S. federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act. The majority of states also have anti-kickback laws, which establish similar prohibitions and in some cases may apply to items or services reimbursed by any third-party payor, including commercial insurers.

The federal false claims and civil monetary penalties laws, including the civil False Claims Act, prohibit any person or entity from, among other things, knowingly presenting, or causing to be presented, a false, fictitious or fraudulent claim for payment to, or approval by, the federal government, knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. Actions under the civil False Claims Act may be brought by the Attorney General or as a qui tam action by a private individual in the name of the government. Violations of the civil False Claims Act can result in very significant monetary penalties and treble damages. Several pharmaceutical and other healthcare companies have been prosecuted under these laws for, among other things, allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of products for unapproved, or off-label, uses. In addition, the civil monetary

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penalties statute imposes penalties against any person who is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. Many states also have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

Violations of fraud and abuse laws, including federal and state anti-kickback and false claims laws, may be punishable by criminal and civil sanctions, including fines and civil monetary penalties, the possibility of exclusion from federal healthcare programs (including Medicare and Medicaid), disgorgement and corporate integrity agreements, which impose, among other things, rigorous operational and monitoring requirements on companies. Similar sanctions and penalties, as well as imprisonment, also can be imposed upon executive officers and employees of such companies. Given the significant size of actual and potential settlements, it is expected that the government authorities will continue to devote substantial resources to investigating healthcare providers' and manufacturers' compliance with applicable fraud and abuse laws.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense and 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. Similar to the U.S. federal Anti-Kickback Statute, the ACA broadened the reach of certain criminal healthcare fraud statutes created under HIPAA by amending the intent requirement such that a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

In addition, there has been a recent trend of increased federal and state regulation of payments made to physicians and certain other healthcare providers. The ACA imposed, among other things, new annual reporting requirements through the Physician Payments Sunshine Act for covered manufacturers for certain payments and "transfers of value" provided to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Failure to submit timely, accurately and completely the required information for all payments, transfers of value and ownership or investment interests may result in civil monetary penalties of up to an aggregate of $150,000 per year and up to an aggregate of $1 million per year for "knowing failures." Covered manufacturers must submit reports by the 90th day of each subsequent calendar year. In addition, certain states require implementation of compliance programs and compliance with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, impose restrictions on marketing practices and/or tracking and reporting of gifts, compensation and other remuneration or items of value provided to physicians and other healthcare professionals and entities.

Napo may also be subject to data privacy and security regulation by both the federal government and the states in which Napo conducts its business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their respective implementing regulations, including the Final HIPAA Omnibus Rule published on January 25, 2013, impose specified requirements relating to the privacy, security and transmission of individually identifiable health information held by covered entities and their business associates. Among other things, HITECH made 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

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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 the federal HIPAA laws and seek attorney's fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same requirements, thus complicating compliance efforts.

Coverage and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any pharmaceutical products for which Napo obtains regulatory approval. In the United States and markets in other countries, patients who are prescribed treatments for their conditions and providers performing the prescribed services generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Patients are unlikely to use Napo's products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of Napo's products. Sales of any products for which Napo receives regulatory approval for commercial sale will therefore depend, in part, on the availability of coverage and adequate reimbursement from third-party payors. Third-party payors include government authorities, managed care plans, private health insurers and other organizations.

In the United States, the process for determining whether a third-party payor will provide coverage for a pharmaceutical or biological product typically is separate from the process for setting the price of such product or for establishing the reimbursement rate that the payor will pay for the product once coverage is approved. Third-party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the FDA-approved products for a particular indication. A decision by a third-party payor not to cover Napo's product candidates could reduce physician utilization of Napo's products once approved and have a material adverse effect on Napo's sales, results of operations and financial condition. Moreover, a third-party payor's decision to provide coverage for a pharmaceutical or biological product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable Napo to maintain price levels sufficient to realize an appropriate return on Napo's investment in product development. Additionally, coverage and reimbursement for products can differ significantly from payor to payor. One third-party payor's decision to cover a particular medical product or service does not ensure that other payors will also provide coverage for the medical product or service, or will provide coverage at an adequate reimbursement rate. As a result, the coverage determination process will require Napo to provide scientific and clinical support for the use of Napo's products to each payor separately and will be a time-consuming process.

In the EEA, governments influence the price of products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed to by the government. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs in general, particularly prescription products, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross border imports from low-priced markets exert a commercial pressure on pricing within a country.

The containment of healthcare costs has become a priority of federal, state and foreign governments, and the prices of pharmaceutical or biological products have been a focus in this effort. Third-party payors are increasingly challenging the prices charged for medical products and services, examining the medical necessity and reviewing the cost-effectiveness of pharmaceutical or biological

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products, medical devices and medical services, in addition to questioning safety and efficacy. If these third-party payors do not consider Napo's products to be cost-effective compared to other available therapies, they may not cover Napo's products after FDA approval or, if they do, the level of payment may not be sufficient to allow Napo to sell its products at a profit.

Healthcare Reform

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and other third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medical products. For example, in March 2010, the ACA was enacted, which, among other things, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program; introduced 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; extended the Medicaid Drug Rebate Program to utilization of prescriptions of individuals enrolled in Medicaid managed care plans; imposed mandatory discounts for certain Medicare Part D beneficiaries as a condition for manufacturers' outpatient drugs coverage under Medicare Part D; subjected drug manufacturers to new annual fees based on pharmaceutical companies' share of sales to federal healthcare programs; created a new Patient Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; creation of the Independent Payment Advisory Board, once empaneled, will have authority to recommend certain changes to the Medicare program that could result in reduced payments for prescription drugs; and establishment of a Center for Medicare Innovation at the CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending. Since its enactment, the U.S. federal government has delayed or suspended implementation of certain provisions of the ACA. In addition, there have been judicial and Congressional challenges to certain aspects of the ACA, and Napo expects there will be additional challenges and amendments to the ACA in the future. For example, in January 2017, the U.S. House of Representatives and Senate passed legislation, which, if signed into law, would repeal certain aspects of the ACA. In addition, Congress could consider subsequent legislation to replace those elements of the ACA if so repealed.

Napo expects that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and lower reimbursement, and additional downward pressure on the price that Napo 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 payors. Moreover, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products. The implementation of cost containment measures or other healthcare reforms may prevent Napo from being able to generate revenue, attain profitability or commercialize Napo's drugs.

Additionally, on August 2, 2011, the Budget Control Act of 2011 created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This included aggregate reductions of Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will stay in effect through 2025 unless additional action is taken by Congress. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. More recently, there has been heightened governmental scrutiny recently over the manner in which manufacturers set prices for their marketed products, which have

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resulted in several recent Congressional inquiries and proposed bills designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for pharmaceutical products.

Napo expects that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for Napo's products once approved or additional pricing pressures.

Employees

As of December 31, 2016, Napo had one employee. None of Napo's employees are represented by labor unions or covered by collective bargaining agreements.

Effective March 27, 2017, Napo named Dr. Pravin Chaturvedi, Napo's former Chief Scientific Officer, as the chair of Napo's Scientific Advisory Board. In this role, Dr. Chaturvedi will be responsible for providing direction on strategy, tactics and oversight to Napo's leadership team regarding advancing the development and commercialization of the Napo drug pipeline, including, but not limited to, Mytesi and SB-300. Dr. Chaturvedi has co-founded and led multiple biotech enterprises including Scion, IndUS and Oceanyx, and has served as the CEO or CSO for Scion, IndUS, Napo, Oceanyx and Pivot Pharmaceuticals. Over his 25+ year career, Dr. Chaturvedi has led the discovery and/or the development activities for several new chemical entities (NCEs) including the successful development of crofelemer (Mytesi) and has participated in the discovery and/or development of novel drugs for the treatment of HIV, hepatitis C, epilepsy and Alzheimer's disease. Earlier in his career, Dr. Chaturvedi was the Head of Lead Evaluation at Vertex Pharmaceuticals and was in the preclinical group at Alkermes. He started his career in the Product Development group at Parke-Davis/Warner-Lambert Company (now Pfizer). Dr. Chaturvedi holds a Ph.D. in Pharmaceutical Sciences from West Virginia University and a Bachelor's in Pharmacy from the University of Bombay.

Description of Properties

Napo's corporate headquarters are located in San Francisco, California, where Napo shares office space with Jaguar. Napo believes that Napo's existing facilities are adequate for the near term and believes that suitable additional or alternative space would be available if required in the future on commercially reasonable terms if Jaguar is not able to convert the current sublease to a lease by August 31, 2018 on commercially reasonable terms. See "Jaguar Business Description of Properties".

Legal Proceedings

Napo is not currently subject to any legal proceedings or claims. However in the ordinary course of business, Napo may become subject to legal proceedings, claims and litigation. Therefore, Napo cannot predict the outcome of such matters or estimate the possible loss or range of loss, if any, because of considerable uncertainties that exist. Therefore, it is possible that the outcome of those legal proceedings, claims and litigation could adversely affect Napo's financial condition, results of operations or cash flows when resolved in a future period.

Napo/Salix Litigation

In May 2011, Napo sued Salix in the New York County Supreme Court of the State of New York with regard to Salix's performance under the collaboration agreement signed with Salix in December 2008 (sometimes referred to herein as the Salix Collaboration Agreement). The litigation ultimately went to trial in February 2014 and the jury found for the defendant, Salix. Napo filed an appeal of the litigation.

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On March 4, 2016, Napo and Salix entered into a Settlement, Termination, Asset Transfer and Transition Agreement (together with any amendments thereto, sometimes referred to herein as the Napo/Salix Settlement Agreement). The Napo/Salix Settlement Agreement settled the litigation between the companies and terminated the Salix Collaboration Agreement. In addition, all rights to crofelemer previously licensed to Salix, including with respect to the FDA approved drug, Mytesi®, were transferred to Napo, along with certain regulatory and other documentation. Napo received inventories of Mytesi® drug product, active pharmaceutical ingredient and crude plant latex (CPL) used in the manufacture of Mytesi®, as well as 490 hectares of land in Peru for which it recognized a gain on settlement of $1,888,319. In addition, certain existing inventory of CPL is expected to be transferred to Napo in 2017. The Napo/Salix Settlement Agreement also provides that Salix (now owned by Valeant Pharmaceuticals International) will receive a portion of the proceeds of any sale of Napo (an acquisition of Napo by Jaguar that meets the conditions as defined in the Napo/Salix Settlement Agreement is excluded) or a portion of any payments made by Napo's licensees, sublicensees or partners of the reverted crofelemer rights or other transferred assets in the former Salix territories, in each case after the deduction of a fixed amount.

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JAGUAR MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

Jaguar is an animal health company focused on developing and commercializing first-in-class gastrointestinal products for companion and production animals, foals, and high value horses. Canalevia is Jaguar's lead prescription drug product candidate, intended for treatment of various forms of diarrhea in dogs. Jaguar achieved statistically significant results in a multicenter canine proof-of-concept study completed in February 2015, supporting the conclusion that Canalevia treatment is superior to placebo. As Jaguar announced in December 2015, the pivotal clinical field study to evaluate the safety and effectiveness of Canalevia for acute diarrhea in dogs is underway. Two-hundred dogs were enrolled in the Canalevia pivotal study, which completed enrollment in January 2017. Jaguar has received Minor Use in a Minor Species (MUMS) designation for Canalevia for Chemotherapy-Induced Diarrhea (CID) in dogs. Canalevia is a canine-specific formulation of crofelemer, an active pharmaceutical ingredient isolated and purified from the *Croton lechleri* tree, which is sustainably harvested. A human-specific formulation of crofelemer, Mytesi (formerly known as Fulyzaq), was approved by the FDA in 2012 for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy. Members of Jaguar's management team developed crofelemer while at Napo, which was Jaguar's parent company until May 13, 2015. The reception among users of Jaguar's lead non-prescription products Neonorm Calf and Neonorm Foal, an anti-diarrheal product Jaguar launched for newborn horses in early 2016 has been quite positive. The clinically-proven performance of Neonorm Foal, in combination with Jaguar's heightened understanding of market needs within the global equine space, is driving Jaguar's increased focus on equine product development. Equilevia (formerly referred to as SB-300) is Jaguar's prescription drug product candidate for treatment of gastrointestinal ulcers in horses. Equilevia is a pharmaceutical formulation of a standardized botanical extract. Neonorm is a standardized botanical extract derived from the *Croton lechleri* tree. Jaguar launched Neonorm Calf in the United States at the end of 2014 for preweaned dairy calves. Canalevia, Equilevia and Neonorm are distinct products formulated to address specific species and market channels. Jaguar has filed nine investigational new animal drug applications, or INADs, with the FDA and intend to develop species-specific formulations of Neonorm in six additional target species, and Canalevia for both cats and dogs. In July 2016 Jaguar released data from two China-based studies sponsored by Fresno, California-based Integrated Animal Nutrition and Health Inc. showing remarkable resolution of diarrhea and cure of piglets afflicted with diarrhea following treatment with a *Croton lechleri* botanical extract administered in water.

As Jaguar announced in December 2016, it has signed a distribution agreement with Henry Schein, Inc., the world's largest provider of health care products and services to office-based dental, animal health and medical practitioners, for exclusive distribution of Neonorm Foal product to all segments of the U.S. equine market. Henry Schein's animal health business, Dublin, Ohio-based Henry Schein Animal Health, employs approximately 900 team members and had 2015 net sales of $2.9 billion. The agreement became effective on December 9, 2016, and, subject to provisions specified in the agreement, shall continue in force for an initial period of one year. Thereafter, unless either party notifies the other of its intent not to renew the term of the agreement at least 30 days prior to the end of the then current term, the term shall be automatically renewed upon expiration for successive renewal terms of one year.

As Jaguar announced in September 2016, it has signed an exclusive supply and distribution agreement for this botanical extract with Integrated Animal Nutrition and Health Inc. for dairy cattle and pigs in the Chinese marketplace. According to the Minnesota-based Institute for Agriculture and Trade Policy, swine production was expected to reach 723 million head in 2014 in China, where pork is still the main protein source for many consumers. In 2015 there were an estimated 15.6 million dairy

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cattle in China, according to Index Muni. Integrated Animal Nutrition and Health, Inc. has minimum purchase requirements of the botanical extract to maintain their exclusivity.

Since inception, Jaguar has been primarily focused on designing and conducting studies of Canalevia to treat diarrhea in dogs and of Neonorm to help retain fluid in calves and to function as an anti-diarrheal in foals. Jaguar is also focused on developing a full suite of equine products to support and improve gastrointestinal health in foals and adult horses. Gastrointestinal conditions such as acute diarrhea, ulcers and diarrhea associated with acute colitis can be extremely debilitating for horses, and present a significant economic and emotional burden for veterinarians and owners around the world. A portion of Jaguar's activities has also been focused on other efforts associated with being a recently formed company, including securing necessary intellectual property, recruiting management and key employees, and financing activities.

On February 8, 2017, Jaguar entered a binding agreement of terms for Jaguar's acquisition of Napo, followed by an agreement and plan of merger on March 31, 2017. Jaguar expects to incur significant expenses in connection with the merger. While Jaguar has assumed that a certain level of expenses will be incurred, there are many factors that could affect the total amount or the timing of the merger expenses, and many of the expenses that will be incurred are, by their nature, difficult to estimate. These expenses could result in the combined company taking significant charges against earnings following the completion of the merger. The ultimate amount and timing of such charges are uncertain at the present time. Jaguar incurred approximately $100,000 in professional and other fees associated with the proposed merger during the year ended December 31, 2016.

On January 27, 2017, Jaguar entered into a licensing, development, co-promotion and commercialization agreement with Elanco to license, develop and commercialize Canalevia, its drug product candidate under investigation for treatment of acute and chemotherapy-induced diarrhea in dogs, and other drug product formulations of crofelemer for treatment of gastrointestinal diseases, conditions and symptoms in cats and other companion animals. The Elanco Agreement grants Elanco exclusive global rights to Canalevia, a product whose active pharmaceutical ingredient is sustainably isolated and purified from the Croton lechleri tree, for use in companion animals. Pursuant to the Elanco Agreement, Elanco will have exclusive rights globally outside the U.S. and co-exclusive rights with Jaguar in the U.S. to direct all marketing, advertising, promotion, launch and sales activities related to the Licensed Products.

Under the terms of the Elanco Agreement, Jaguar received a $2,548,689 upfront payment, inclusive of reimbursement of past product and development expenses of $1,048,689, and will receive additional payments upon achievement of certain development, regulatory and sales milestones in an aggregate amount of up to $61.0 million payable throughout the term of the Elanco Agreement, as well as product development expense reimbursement, and royalty payments on global sales. The Elanco Agreement specifies that Jaguar will supply the Licensed Products to Elanco, and that the parties will agree to set a minimum sales requirement that Elanco must meet to maintain exclusivity. Elanco will also reimburse Jaguar for Canalevia-related expenses, including reimbursement for Canalevia-related expenses in Q4 2016, certain development and regulatory expenses related to Jaguar's planned target animal safety study and the completion of its field study of Canalevia for acute diarrhea in dogs.

Financial Operations Overview

Jaguar was incorporated in June 2013 in Delaware. Napo formed Jaguar to develop and commercialize animal health products. Prior to Jaguar's incorporation, the only activities of Napo related to animal health were limited to the retention of consultants to evaluate potential strategic alternatives. Jaguar was previously a majority-owned subsidiary of Napo. However, following the closing of Jaguar's initial public offering in May 2015, Jaguar is no longer majority-owned by Napo.

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Jaguar has not generated any material revenue to date and expect to continue to incur significant research and development and other expenses. Jaguar's net loss attributable to common stockholders was $4.7 million and $4.0 million for the three months ended March 31, 2017 and 2016. As of March 31, 2017, Jaguar had total stockholders' deficit of $6.2 million and cash and cash equivalents of $1.2 million. Jaguar expects to continue to incur losses for the foreseeable future as Jaguar expands its product development activities, seek necessary approvals for its product candidates, conduct species-specific formulation studies for its non-prescription products, establish API manufacturing capabilities and begin commercialization activities. As a result, Jaguar expects to experience increased expenditures for 2017.

Revenue

Jaguar sells its primary commercial product Neonorm to distributors under agreements that may provide distributor price adjustments and rights of return under certain circumstances. Until Jaguar has sufficient sales history and pipeline visibility, Jaguar will defer revenue and costs of distributor sales until products are sold by the distributor to the distributor's customers. Revenue recognition depends on notification either directly from the distributor that product has been sold to the distributor's customer, when Jaguar has access to the data. Jaguar maintains system controls to verify that the reported distributor and third party data is accurate. Deferred revenue on shipments to distributors will reflect the estimated effects of distributor price adjustments, if any, and the estimated amount of gross margin expected to be realized when the distributor sells through product purchased from the Company. Accounts receivable from distributors will be recognized and included in deferred revenue when Jaguar ships product to the distributor. Jaguar relieves inventory and recognizes revenue typically upon shipment by the distributor to its customer. Jaguar recognized $141,523 and $258,381 in revenue for the years ended December 31, 2016 and 2015, respectively.

Cost of Revenue

Cost of revenue expenses consist of costs to manufacture, package and distribute Neonorm that distributors have sold through to their customers.

Research and Development Expense

Research and development expenses consist primarily of clinical and contract manufacturing expense, personnel and related benefit expense, stock-based compensation expense, employee travel expense, reforestation expenses. Clinical and contract manufacturing expense consists primarily of costs to conduct stability, safety and efficacy studies, and manufacturing startup expenses at an outsourced API provider in Italy.

Jaguar typically uses its employee and infrastructure resources across multiple development programs. Jaguar tracks outsourced development costs by prescription drug product candidate and non-prescription product but does not allocate personnel or other internal costs related to development to specific programs or development compounds.

The timing and amount of Jaguar's research and development expenses will depend largely upon the outcomes of current and future trials for its prescription drug product candidates as well as the related regulatory requirements, the outcomes of current and future species-specific formulation studies for its non-prescription products, manufacturing costs and any costs associated with the advancement of its line extension programs. Jaguar cannot determine with certainty the duration and completion costs of the current or future development activities.

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The duration, costs and timing of trials, formulation studies and development of Jaguar's prescription drug and non-prescription products will depend on a variety of factors, including:

- the scope, rate of progress, and expense of Jaguar's ongoing, as well as any additional clinical trials, formulation studies and other research and development activities;
- future clinical trial and formulation study results;
- potential changes in government regulations; and
- the timing and receipt of any regulatory approvals.

A change in the outcome of any of these variables with respect to the development of a prescription drug product candidate or non-prescription product could mean a significant change in the costs and timing associated with Jaguar's development activities.

Jaguar expects research and development expense to increase significantly as it adds personnel and commences additional clinical studies and other activities to develop its prescription drug product candidates and non-prescription products.

Sales and Marketing Expense

Sales and marketing expenses consist of personnel and related benefit expense, stock-based compensation expense, direct sales and marketing expense, employee travel expense, and management consulting expense. Jaguar currently incurs sales and marketing expenses to promote Neonorm calf and foal sales.

Jaguar expects sales and marketing expense to increase significantly as it develops and commercializes new products and grows its existing Neonorm market. Jaguar will need to add sales and marketing headcount to promote the sales of existing and new products.

General and Administrative Expense

General and administrative expenses consist of personnel and related benefit expense, stock-based compensation expense, employee travel expense, legal and accounting fees, rent and facilities expense, and management consulting expense.

Jaguar expects general and administrative expense to increase in order to enable Jaguar to effectively manage the overall growth of the business. This will include adding headcount, enhancing information systems and potentially expanding corporate facilities.

Interest Expense

Interest expense consists primarily of interest on convertible promissory notes, the standby bridge financing commitment and the loan and security agreement (long-term debt arrangement). It also includes interest expense and the amortization of a beneficial conversion feature related to convertible promissory notes issued in June and December 2014 and in February and March 2015.

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Results of Operations

Comparison of the three months ended March 31, 2017 and 2016

The following table summarizes Jaguar's results of operations with respect to the items set forth in such table for the three months ended March 31, 2017 and 2016 together with the change in such items in dollars and as a percentage:

	Three Months Ended March 31,			
	2017	2016	Variance	Variance %
Revenue	$ 74,544	$ 38,146	$ 36,398	95.4%
Collaboration Revenue	747,866		747,866	N/A
Total revenue	822,410	38,146	784,264	2056.0%
Operating Expenses				
Cost of revenue	16,145	18,368	(2,223)	(12.1)%
Research and development expense	1,255,452	1,751,741	(496,289)	(28.3)%
Sales and marketing expense	122,912	164,413	(41,501)	(25.2)%
General and administrative expense	3,303,503	1,788,385	1,515,118	84.7%
Total operating expenses	4,698,012	3,722,907	975,105	26.2%
Loss from operations	(3,875,602)	(3,684,761)	(190,841)	(5.2)%
Interest expense, net	(180,072)	(284,236)	104,165	36.7%
Other income	1,448	(15,207)	16,655	109.5%
Change in fair value of warrants	(453,419)		(453,419)	N/A
Loss on extinguishment of debt	(207,713)		(207,713)	N/A
Net loss and comprehensive loss	$ (4,715,358)	$ (3,984,204)	$ (731,154)	(18.4)%

Revenue and Cost of Revenue

Neonorm Calf and Foal

Revenue of $44,544 and $38,146 and related cost of revenue of $16,145 and $18,368 for the three months ended March 31, 2017 and 2016 reflects sell-through of Jaguar's Neonorm Calf and Neonorm Foal products to Jaguar's distributors. Jaguar defers recognizing revenue and cost of revenue until products are sold by the distributor to the distributor's end customers and recognition depends on notification from the distributor that product has been sold to the distributor's end customer. Jaguar experienced a slight increase in unit sales in the three months ended March 31, 2017 compared to the same period in 2016 resulting in the increase in revenue. The insignificant decrease in cost of revenue resulted from the sale of lower weighted average cost of inventory sold. Jaguar is increasing its efforts to promote sales growth.

Botanical extract

Jaguar began selling botanical extract to a distributor for use exclusively in China beginning in December 2016. The revenue from these sales, which totaled $30,000 in the three months ended March 31, 2017, is recognized upon shipment to the distributor as no return rights are provided to this distributor. Jaguar experienced a reduction in Neonorm Calf unit sales in the year ended December 31, 2016 compared to 2015 resulting in the decrease in revenue. Jaguar had no cost of product revenue associated with the botanical extract as it wrote off the full value of the botanical extract to expense in 2014 due to uncertainty of future use and ability to sell to a customer.

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Collaboration revenue

On January 27, 2017, Jaguar entered into a licensing, development, co-promotion and commercialization agreement with Elanco to license, develop and commercialize Canalevia ("Licensed Product"), Jaguar's drug product candidate under investigation for treatment of acute and chemotherapy-induced diarrhea in dogs, and other drug product formulations of crofelemer for treatment of gastrointestinal diseases, conditions and symptoms in cats and other companion animals. Jaguar is granting to Elanco exclusive global rights to Canalevia, a product whose active pharmaceutical ingredient is sustainably isolated and purified from the Croton lechleri tree, for use in companion animals. Pursuant to the Elanco Agreement, Elanco will have exclusive rights globally outside the U.S. and co-exclusive rights with Jaguar in the U.S. to direct all marketing, advertising, promotion, launch and sales activities related to the Licensed Products. Under the terms of the Elanco Agreement, Jaguar received an initial upfront payment of $1,500,000 and product development expense reimbursement of $1,048,689. The Company will receive additional payments upon achievement of certain development, regulatory and sales milestones in an aggregate amount of up to $61.0 million payable throughout the term of the Elanco Agreement, as well as product development expense reimbursement for any additional product development expenses incurred, and royalty payments on global sales. The $61.0 million development and commercial milestones consist of $1.0 million for successful completion of a dose ranging study; $2.0 million for the first commercial sale of license product for acute indications of diarrhea; $3.0 million for the first commercial sale of a license product for chronic indications of diarrhea; $25.0 million for aggregate worldwide net sales of licensed products exceeding $100.0 million in a calendar year during the term of the agreement; and $30.0 million for aggregate worldwide net sales of licensed products exceeding $250.0 million in a calendar year during the term of the agreement. The Elanco Agreement specifies that Jaguar will supply the Licensed Products to Elanco, and that the parties will agree to set a minimum sales requirement that Elanco must meet to maintain exclusivity. Elanco will reimburse Jaguar for certain development and regulatory expenses related to Jaguar's planned target animal safety study and the completion of Jaguar's field study of Canalevia for acute diarrhea in dogs. The $2,548,689 combined total of the upfront payment and product development expense reimbursement is recognized as collaboration revenue ratably over the estimated development period of one year resulting in $747,866 in collaboration revenue in the three months ended March 31. Jaguar elected to include $288,166 of the additional expense reimbursements in 2017 as collaboration revenue in the three months ended March 31, 2017.

Research and Development Expense

The following table presents the components of research and development expense for the three months ended March 31, 2017 and 2016 together with the change in such components in dollars and as a percentage:

	Three Months Ended March 31,			
	2017	**2016**	**Variance**	**Variance %**
R&D:				
Personnel and related benefits	$ 460,619	$ 662,100	$ (201,481)	(30.4)%
Materials expense and tree planting	38,101	31,799	6,302	19.8%
Travel, other expenses	72,570	108,181	(35,611)	(32.9)%
Clinical and contract manufacturing	295,504	703,204	(407,700)	(58.0)%
Stock-based compensation	65,799	25,333	40,466	159.7%
Other	322,859	221,124	101,735	46.0%
Total	$ 1,255,452	$ 1,751,741	$ (496,289)	(28.3)%

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Jaguar's research and development expense decreased $496,289 from $1,751,741 in the three months ended March 31, 2016 to $1,255,452 for the same period in 2017. Personnel and related benefits decreased $201,481 from $662,100 in the three months ended March 31, 2016 to $460,619 in the same period in 2017 due to $277,873 employee leasing chargebacks to Napo for services rendered in Q1 2017 net of an increase of $76,392 due to an increase in headcount from 12 in the three months ended March 31, 2016 to 14 in the same period in 2017. Jaguar carefully controlled spend in clinical trials and contract manufacturing resulting in a reduction of expense of $407,700 from $703,204 in the three months ended March 31, 2016 to $295,504 in the same period in 2017. In addition, Jaguar realized a $329,324 decrease in contract manufacturing expenses due to the completion of the manufacturing setup in Italy in the first quarter of 2016. Stock-based compensation increased $40,466 from $25,333 in the three months ended March 31, 2016 to $65,799 in the same period in 2017 primarily due to an increase in the number of outstanding option grants year over year. Other expenses, consisting primarily of consulting and formulation expenses, increased $101,735 from $221,124 in the three months ended March 31, 2016 to $322,859 in the same period in 2017. Consulting expenses increased $37,459 from $173,552 in the three months ended March 31, 2016 to $211,011 in the same period in 2017 due to a substantial increase in contractor utilization to assist in Jaguar's clinical trials and in chemistry, manufacturing and controls ("CMC") activities. Formulation expenses increased $63,465 from $0 in the three months ended March 31, 2016 to $63,465 for the same period in 2017 due to an increase in work needed to supply clinical operations with active and placebo product for use in clinical trials. Jaguar plans to increase its research and development expense as it continues developing its drug candidates.

Jaguar increased support for the reforestation of croton lechleri trees in South America, which is reflected in an increase in its spend by almost 20% from $31,799 in the three months ended March 31, 2016 to $38,101 in the same period in 2017. Jaguar values and takes to heart the responsibility to replenish trees consumed in order to extract the raw material to manufacture its primary commercial product and the drug product for use in clinical trials.

Sales and Marketing Expense

The following table presents the components of sales and marketing expense for the three months ended March 31, 2017 and 2016 together with the change in such components in dollars and as a percentage:

	Three Months Ended March 31,			
	2017	**2016**	**Variance**	**Variance %**
S&M:				
Personnel and related benefits	$ 64,890	$ 89,036	$ (24,146)	(27.1)%
Stock-based compensation	7,658	8,681	(1,023)	(11.8)%
Direct Marketing Fees	29,876	37,305	(7,429)	(19.9)%
Other	20,488	29,391	(8,903)	(30.3)%
Total	$ 122,912	$ 164,413	$ (41,501)	(25.2)%

Jaguar's sales and marketing expense decreased $41,501 from $164,413 in the three months ended March 31, 2016 to $122,912 in the same period in 2017. Personnel and related benefits decreased $24,146 from $89,036 in the three months ended March 31, 2016 to $64,890 in the same period in 2017 due primarily to $19,767 employee leasing chargebacks to Napo for services rendered in Q1 2017 and the remaining $4,379 decrease was due to the elimination of certain executive level personnel. Stock based compensation expense decreased $1,023 from $8,681 in the three months ended March 31, 2016 to $7,658 in the same period in 2017. Direct marketing and sales expense decreased $7,429 from $37,305 in the three months ended March 31, 2016 to $29,876 for the same period in 2017 due to a

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reduction in marketing programs to promote Jaguar's Neonorm products. Other expenses, consisted primarily of travel expense, consulting expense and royalty expense, which collectively decreased $8,903 from $29,391 in the three months ended March 31, 2016 to $20,488 in the same period in 2017. Jaguar plans to expand sales and marketing spend to promote its Neonorm products.

General and Administrative Expense

The following table presents the components of general and administrative expense for the three months ended March 31, 2017 and 2016 together with the change in such components in dollars and as a percentage:

	Three Months Ended March 31,			
	2017	**2016**	**Variance**	**Variance %**
G&A:				
Personnel and related benefits	$ 382,112	$ 685,155	$ (303,043)	(44.2)%
Accounting fees	177,178	121,498	55,680	45.8%
Third-party consulting fees and Napo service fees	944,261	122,031	822,230	673.8%
Legal fees	1,201,215	186,604	1,014,611	543.7%
Travel	67,381	104,779	(37,398)	(35.7)%
Stock-based compensation	154,579	69,528	85,051	122.3%
Rent and lease expense	78,987	101,170	(22,183)	(21.9)%
Public company expenses	79,424	97,658	(18,234)	(18.7)%
Other	218,366	299,962	(81,596)	(27.2)%
Total	$ 3,303,503	$ 1,788,385	$ 1,515,118	84.7%

Jaguar's general and administrative expenses increased $1,515,118 from $1,788,385 in the three months ended March 31, 2016 to $3,303,503 for the same period in 2017 due primarily to $1,655,496 in merger related expenses incurred in the three months ended March 31, 2017, including $858,103 in consulting services for a fairness opinion, $777,393 in estimated legal fees and $20,000 in estimated audit fees. Personnel and related benefits decreased $303,043 from $685,155 in the three months ended March 31, 2016 to $382,112 in the same period in 2017. Jaguar reduced headcount significantly from eleven in the three months ended March 31, 2016 to seven in the same period in 2017, which resulted in a $243,005 decrease in expense. In addition, Jaguar charged back Napo $60,038 in employee leasing chargebacks for services rendered in Q1 2017. Stock-based compensation increased $85,051 from $69,528 in the three months ended March 31, 2016 to $154,579 in the same period in 2017 due primarily to expense associated with new grants to existing employees. Jaguar's public company expenses decreased $18,234 from $97,658 in the three months ended March 31, 2016 to $79,424 in the same period in 2017. In addition to the $20,000 of audit related merger fees discussed above, Jaguar's annual and other audit fees increased by another $35,680 resulting in an aggregate $55,680 increase in accounting fees from $121,498 in the three months ended March 31, 2016 to $177,178 in the same period in 2017. In addition to the $777,393 of legal related merger fees, Jaguar's general corporate and public securities legal fees increased an additional $237,218 resulting in an aggregate increase of $1,014,611 in legal fees from $186,614 in the three months ended March 31, 2016 to $1,201,215 in the same period in 2017. In addition to the $858,103 in merger related consulting fees, Jaguar's non-merger related consulting expenses actually decreased by $35,873 resulting in aggregate increase of $822,230 from $122,031 in the three months ended March 31, 2016 to $944,261 in the same period in 2017. Rent expense decreased $22,183 from $101,170 in the three months ended March 31, 2016 to $78,987 in the same period in 2017 due primarily to $31,866 in employee leasing chargebacks to Napo for space used in connection with Jaguar's employees providing services to Napo in the three months ended March 31, 2017, offset in part by three months of company apartment rent of approximately $4,000 per month in

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the three months ended March 31, 2017. Other expenses, including insurance costs, office and facilities expenses decreased $81,596 from $299,962 in the three months ended March 31, 2016 to $218,366 in the same period in 2017 primarily due to a reduction of $92,875 in recruiting fees. Jaguar expects to incur additional general and administrative expense as a result of operating as a public company and as Jaguar grows its business, including expenses related to compliance with the rules and regulations of the SEC, additional insurance expenses, investor relations activities and other administrative and professional services.

Comparison of the years ended December 31, 2016 and 2015

The following table summarizes Jaguar's results of operations with respect to the items set forth in such table for the years ended December 31, 2016 and 2015 together with the change in such items in dollars and as a percentage:

	Years Ended December 31,		Variance	
	2016	2015	($)	(%)
Revenue	$ 141,523	$ 258,381	$ (116,858)	(45.2)%
Operating Expenses				
Cost of revenue	51,966	123,457	(71,491)	(57.9)%
Research and development expense	7,206,864	6,475,851	731,013	11.3%
Sales and marketing expense	485,440	765,091	(279,651)	(36.6)%
General and administrative expense	5,983,238	5,339,351	643,887	12.1%
Total operating expenses	13,727,508	12,703,750	1,023,758	8.1%
Loss from operations	(13,585,985)	(12,445,369)	(1,140,616)	9.2%
Interest expense, net	(985,549)	(3,317,287)	2,331,738	(70.3)%
Other expense	(11,046)	(27,277)	16,231	(59.5)%
Change in fair value of warrants	(43,200)	(501,617)	458,417	(91.4)%
Loss on extinguishment of debt	(108,000)		(108,000)	N/A
Net loss and comprehensive loss	$ (14,733,780)	$ (16,291,550)	$ 1,557,770	(9.6)%

Revenue and Cost of Revenue

Revenue and related cost of revenue for the years ended December 31, 2016 and 2015 reflects sell-through of Jaguar's Neonorm Calf and Neonorm Foal products to Jaguar's distributors. Jaguar defers recognizing revenue and cost of revenue until products are sold by the distributor to the distributor's end customers and recognition depends on notification from the distributor that product has been sold to the distributor's end customer. In 2016, Jaguar began selling the botanical extract to a distributor for use exclusively in China. The revenue from these sales, which totaled $24,000 in the year ended December 31, 2016, is recognized upon shipment to the distributor as no return rights are provided to this distributor. Jaguar experienced a reduction in Neonorm Calf unit sales in the year ended December 31, 2016 compared to 2015 resulting in the decrease in revenue. The decrease in cost of revenue was consistent with the decrease in revenue. Jaguar is increasing its efforts to promote sales growth.

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Research and Development Expense

The following table presents the components of research and development expense for the years ended December 31, 2016 and 2015 together with the change in such components in dollars and as a percentage:

	Years Ended December 31,			
	2016	**2015**	**Variance**	**Variance %**
R&D:				
Personnel and related benefits	$ 2,546,220	$ 1,891,954	$ 654,266	34.6%
Materials expense and tree planting	113,394	187,876	(74,482)	(39.6)%
Travel, other expenses	400,846	360,362	40,484	11.2%
Clinical and contract manufacturing	2,254,122	3,093,193	(839,071)	(27.1)%
Stock-based compensation	181,489	472,145	(290,656)	(61.6)%
Other	1,710,793	470,321	1,240,472	263.8%
Total	$ 7,206,864	$ 6,475,851	$ 731,013	11.3%

Jaguar increased research and development expense $731,000 from $6.5 million in the year ended December 31, 2015 to $7.2 million for the same period in 2016. Jaguar added headcount to enable it to make significant progress in the development of certain drug candidates that resulted in the increase of $654,000 in personnel and related benefit expenses, while carefully controlling spend in clinical trials and contract manufacturing. Clinical trial expenses increased due to Jaguar's dog safety and efficacy study and its horse dose determination study both of which began in fiscal year 2016. These expenses were offset by a reduction of contract manufacturing expenses associated with the setup of manufacturing in Italy, which was completed in March 2016. Stock-based compensation decreased $291,000 from $472,000 in the year December 31, 2015 to $181,000 in the same period in 2016 primarily due to the reduction in the fair market value of Jaguar common stock. Other expenses, consisting primarily of consulting and formulation expenses, increased $1.2 million from $470,000 in the year ended December 31, 2015 to $1.7 million in the same period in 2016. Consulting expenses increased $940,000 from $135,000 in the year ended December 31, 2015 to $1.1 million in the same period in 2016 due to a substantial increase in contractor utilization to assist in Jaguar's clinical trials and in chemistry, manufacturing and controls ("CMC") activities. Formulation expenses increased $250,000 from $170,000 in the year ended December 31, 2015 to $420,000 for the same period in 2016 due to an increase in work needed to supply clinical operations with active and placebo product for use in clinical trials. Jaguar plans to increase its research and development expense as it continues developing its drug candidates.

Jaguar also continued its reforestation efforts, although its expense decreased $74,000 from $188,000 in the year ended December 31, 2015 to $113,000 for the same period in 2016. Jaguar values and takes to heart the responsibility to replenish trees consumed in order to extract the raw material to manufacture its primary commercial product and the drug product for use in clinical trials.

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Sales and Marketing Expense

The following table presents the components of sales and marketing expense for the years ended December 31, 2016 and 2015 together with the change in such components in dollars and as a percentage:

	Years Ended December 31,			
	2016	**2015**	**Variance**	**Variance %**
S&M:				
Personnel and related benefits	$ 198,100	$ 347,944	$ (149,844)	(43.1)%
Stock-based compensation	73,679	54,115	19,564	36.2%
Direct Marketing Fees	116,417	196,910	(80,493)	(40.9)%
Other	97,244	166,122	(68,878)	(41.5)%
Total	$ 485,440	$ 765,091	$ (279,651)	(36.6)%

Sales and marketing expense decreased $280,000 from $765,000 in the year ended December 31, 2015 to $485,000 in the same period in 2016 primarily due to a decrease in average monthly headcount for most of the fiscal year and a decrease in direct marketing expense. Personnel costs decreased $150,000 from $348,000 for the year ended December 31, 2015 to $198,000 for the same period in 2016. Stock based compensation expense increased $20,000 from $54,000 in the year ended December 31, 2015 to $74,000 in the same period in 2016 due primarily to expense associated with options granted to a consultant in 2016. Direct marketing and sales expense decreased $81,000 from $197,000 in the year ended December 31, 2015 to $116,000 for the same period in 2016 due to a reduction in marketing programs to promote Jaguar's Neonorm products. Other expenses, consisted primarily of travel expense, consulting expense and royalty expense. Travel expenses decreased $42,000 from $66,000 in the year ended December 31, 2015 to $25,000 in the same period in 2016 consistent with the reduction in headcount. Consulting expense increased $7,000 from $47,000 in the year ended December 31, 2015 to $54,000 in the same period in 2016. Royalty expenses decreased $39,000 from $40,000 in the year ended December 31, 2015 to $1,000 in the same period in 2016 due to a reduction in the royalty rate upon going public and also due to the decrease in sales of Jaguar's Neonorm products. Jaguar plans to expand sales and marketing spend to promote its Neonorm products.

General and Administrative Expense

The following table presents the components of general and administrative expense for the years ended December 31, 2016 and 2015 together with the change in such components in dollars and as a percentage:

	Years Ended December 31,			
	2016	**2015**	**Variance**	**Variance %**
G&A:				
Personnel and related benefits	$ 2,104,809	$ 2,025,339	$ 79,470	3.9%
Accounting fees	311,693	351,743	(40,050)	(11.4)%
Third-party consulting fees and Napo service fees	374,852	200,758	174,094	86.7%
Legal fees	824,288	611,237	213,051	34.9%
Travel	310,066	442,095	(132,029)	(29.9)%
Stock-based compensation	462,759	465,905	(3,146)	(0.7)%
Rent and lease expense	384,147	280,753	103,394	36.8%
Public company expenses	291,253	234,247	57,006	24.3%
Other	919,371	727,274	192,097	26.4%
Total	$ 5,983,238	$ 5,339,351	$ 643,887	12.1%

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Jaguar's general and administrative expenses increased $644,000 from $5.3 million in the year ended December 31, 2015 to $6.0 million for the same period in 2016. In 2015, Jaguar became a public company and added headcount that has resulted in increases of $79,000 in personnel expense. Stock-based compensation was flat at $466,000 in the year ended December 31, 2015 compared to $463,000 in the same period in 2016 due to expense associated with new grants to existing employees offsetting the reduction in Jaguar's stock price. Its public company expenses increased $57,000 due primarily to a full year of expense in 2016 versus only seven months of expense in 2015 as it filed its IPO in May 2015. Jaguar controlled its professional services expenses, reducing its audit fees by $40,000. However, Jaguar's legal fees increased $213,000 from $611,000 in the year ended December 31, 2015 compared to $824,000 in the same period in 2016 due to increased public filings with the SEC, and Jaguar increased consulting expenses by $174,000 from $201,000 in the year ended December 31, 2015 to $375,000 in the same period in 2016 primarily due to placement agent fees related to the 2016 private placement financing in 2016. Rent expense increased $103,000 due to moving into Jaguar's new San Francisco headquarters facility in July of 2015. Other expenses, including insurance costs also increased as a result of becoming a public company in May 2015. Jaguar expects to incur additional general and administrative expense as a result of operating as a public company and as it grows its business, including expenses related to compliance with the rules and regulations of the SEC, additional insurance expenses, investor relations activities and other administrative and professional services.

Liquidity and Capital Resources

Sources of Liquidity

Jaguar had an accumulated deficit of $40.4 million as a result of incurring net losses since its inception as Jaguar has not generated significant revenue through the current fiscal year. Jaguar's net loss and comprehensive loss was $801,000 for the period from inception to December 31, 2013, $8.6 million for the year ended December 31, 2014, $16.3 million for the year ended December 31, 2015, $14.7 million for the year ended December 31, 2016, and $4.7 million for the three months ended March 31, 2017. Jaguar expects to continue to incur additional losses through the end of fiscal year 2017 and in future years due to expected significant expenses for toxicology, safety and efficacy clinical trials of its products and product candidates, for establishing contract manufacturing capabilities, and for the commercialization of one or more of its product candidates, if approved.

Jaguar had cash and cash equivalents of $1,205,061 as of March 31, 2017, as compared to $951,000 as of December 31, 2016 and $7.7 million as of December 31, 2015. Jaguar does not believe its existing cash and cash equivalents will be sufficient to meet its anticipated cash requirements for the next 12 months. Jaguar's independent registered public accounting firm has included an explanatory paragraph in its audit report included in Jaguar's financial statements attached hereto regarding their assessment of substantial doubt about Jaguar's ability to continue as a going concern. Jaguar's financial statements do not include any adjustments that may result from the outcome of this uncertainty.

To date, Jaguar has funded its operations primarily through the issuance of equity securities, short-term convertible promissory notes, and long-term debt, in addition to sales of Neonorm, its commercial product:

In 2013, Jaguar received $400 from the issuance of 2,666,666 shares of common stock to its parent Napo Pharmaceuticals, Inc. Jaguar also received $519,000 of net cash from the issuance of convertible promissory notes in an aggregate principal amount of $525,000. These notes were all converted to common stock in 2014.

In 2014, Jaguar received $6.7 million in proceeds from the issuance of convertible preferred stock. Effective as of the closing of its initial public offering, the 3,015,902 shares of outstanding convertible preferred stock were automatically converted into 2,010,596 shares of common stock. Following its initial public offering, there were no shares of preferred stock outstanding.

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In 2014, Jaguar received $1.1 million from the issuance of convertible promissory notes in an aggregate principal amount of $1.1 million. These notes were converted to common stock upon the effectiveness of the initial public offering in May of 2015. In August 2014, Jaguar entered into a standby line of credit with an individual, who is an accredited investor, for up to $1.0 million. To date, Jaguar had not made any drawdowns under this facility. Also, in October of 2014, as amended and restated in December 2014, Jaguar entered into a $1.0 million standby bridge loan which was repaid in 2015.

In 2015, Jaguar received $1.25 million in exchange for $1.25 million of convertible promissory notes, of which $1.0 million was converted to common stock in 2015, and $100,000 was repaid in 2015. The remaining $150,000 remains outstanding.

In May 2015, Jaguar received net proceeds of $15.9 million upon the closing of its initial public offering, gross proceeds of $20.0 million (2,860,000 shares at $7.00 per share) net of $1.2 million of underwriting discounts and commissions and $3.3 million of offering expenses, including $0.4 million of non-cash expense. These shares began trading on The NASDAQ Capital Market on May 13, 2015.

In 2015, Jaguar received net proceeds of $5.9 million from the issuance of long-term debt. Jaguar entered into a loan and security agreement with a lender for up to $8.0 million, which provided for an initial loan commitment of $6.0 million. Under the loan agreement Jaguar is required to maintain $4.5 million of the proceeds in cash, which amount may be reduced or eliminated on the achievement of certain milestones. An additional $2.0 million is available contingent on the achievement of certain further milestones. The agreement has a term of three years, with interest only payments through February 29, 2016. Thereafter, principal and interest payments will be made with an interest rate of 9.9%. Additionally, there will be a balloon interest payment of $560,000 on August 1, 2018. This amount is being recognized over the term of the loan agreement and the effective interest rate, considering the balloon payment, is 15.0%. Jaguar's proceeds are net of a $134,433 debt discount under the terms of such agreement.

In 2014 and 2015, Jaguar received $24,000 and $531,000, respectively, in cash from sales of Neonorm to distributors.

In 2015, Jaguar received approximately $13,000 in proceeds from the exercise of stock options.

In 2016, Jaguar received net proceeds of $4.1 million upon the closing of its follow-on public offering, reflecting gross proceeds of $5.0 million (2.0 million shares at $2.50 per share) net of $373,011 of underwriting discounts and commissions and $496,887 of offering expenses.

In June 2016, Jaguar entered into the CSPA with a private investor. Under the terms of the agreement, Jaguar may sell up to $15.0 million in common stock to the investor during the approximately 30-month term of the agreement. Upon execution of the CSPA, Jaguar sold 222,222 shares of its common stock to the investor at $2.25 per share for net proceeds of $448,732, reflecting gross proceeds of $500,000 and offering expenses of $51,268. In consideration for entering into the CSPA, Jaguar issued 456,667 shares of its common stock to the investor. Jaguar issued 1,348,601 shares in exchange for net proceeds of $2,122,570, reflecting gross proceeds of $2,176,700 net of $54,130 offering expenses under the CSPA in the year ended December 31, 2016.

In October 2016, Jaguar entered into a Common Stock Purchase Agreement with an existing private investor. Upon execution of the agreement Jaguar sold 170,455 shares of its common stock in exchange for $150,000 in cash proceeds.

On November 22, 2016, Jaguar entered into a Securities Purchase Agreement, or the 2016 Purchase Agreement, with certain institutional investors, pursuant to which Jaguar sold securities

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to such investors in a private placement transaction, which is referred to herein as the 2016 Private Placement. In the 2016 Private Placement, Jaguar sold an aggregate of 1,666,668 shares of its common stock at a price of $0.60 per share for gross proceeds of approximately $1.0 million. The investors in the 2016 Private Placement also received (i) warrants to purchase up to an aggregate of 1,666,668 shares of Jaguar common stock, at an exercise price of $0.75 per share, or the Series A Warrants, (ii) warrants to purchase up to an aggregate 1,666,668 shares of Jaguar common stock, at an exercise price of $0.90 per share, or the Series B Warrants, and (iii) warrants to purchase up to an aggregate 1,666,668 shares of Jaguar common stock, at an exercise price of $1.00 per share, or the Series C Warrants and, together with the Series A Warrants and the Series B Warrants, the 2016 Warrants.

On January 27, 2017, Jaguar entered into a licensing, development, co-promotion and commercialization agreement with Elanco to license, develop and commercialize Canalevia, Jaguar's drug product candidate under investigation for treatment of acute and chemotherapy-induced diarrhea in dogs, and other drug product formulations of crofelemer for treatment of gastrointestinal diseases, conditions and symptoms in cats and other companion animals. The Elanco Agreement grants Elanco exclusive global rights to Canalevia, a product whose active pharmaceutical ingredient is sustainably isolated and purified from the Croton lechleri tree, for use in companion animals. Pursuant to the Elanco Agreement, Elanco will have exclusive rights globally outside the U.S. and co-exclusive rights with us in the U.S. to direct all marketing, advertising, promotion, launch and sales activities related to the Licensed Products. Under the terms of the Elanco Agreement, Jaguar received an initial upfront payment of $1,500,000 and product development expense reimbursement of $1,048,689. Jaguar will receive additional payments upon achievement of certain development, regulatory and sales milestones in an aggregate amount of up to $61.0 million payable throughout the term of the Elanco Agreement, as well as product development expense reimbursement for any additional product development expenses incurred, and royalty payments on global sales. The Elanco Agreement specifies that Jaguar will supply the Licensed Products to Elanco, and that the parties will agree to set a minimum sales requirement that Elanco must meet to maintain exclusivity. Elanco will also reimburse Jaguar for Canalevia-related expenses, including reimbursement for Canalevia-related expenses in Q4 2016, certain development and regulatory expenses related to Jaguar's planned target animal safety study and the completion of its field study of Canalevia for acute diarrhea in dogs.

Prior to Jaguar's entry into the merger agreement, Invesco Asset Management Limited (sometimes referred to herein as Invesco), an existing stockholder of both Napo and Jaguar, delivered a signed commitment letter to Jaguar on February 21, 2017, pursuant to which Invesco agreed, subject to the terms and conditions of such agreement, to purchase, simultaneously with the consummation of the merger, $3.0 million of Jaguar common stock at a price equal to $0.925 per share. Jaguar will loan Napo the $3.0 million in proceeds to partially facilitate the extinguishment of the debt that Napo owes to Nantucket.

On or about June 23, 2017, Jaguar entered into securities purchase agreements, with two accredited investors, pursuant to which Jaguar will sell 200,000 shares of Jaguar common stock in exchange for $100,000 in cash proceeds.

On June 29, 2017, Jaguar entered into a definitive agreement with an institutional investor, pursuant to which Jaguar issued a convertible promissory note in the original principal amount of $2,155,000 in exchange for $1,700,000 in cash proceeds.

Jaguar expects its expenditures will continue to increase as it continues its efforts to develop animal health products, expand its commercially available Neonorm product and continue development of Canalevia in the near term. Jaguar has agreed to pay Indena S.p.A. fees of approximately €

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2.1 million under a memorandum of understanding relating to the establishment of its commercial API manufacturing arrangement in Italy. As of June 30, 2016, Jaguar remitted €1.95 million of the €2.1 million. Jaguar paid the final €150,000 on July 15, 2016.

Jaguar does not believe its current capital is sufficient to fund its operating plan through March 2018. Jaguar will need to seek additional funds sooner than planned, through public or private equity or debt financings or other sources, such as strategic collaborations. Such financing may result in dilution to stockholders, imposition of debt covenants and repayment obligations or other restrictions that may affect its business. In addition, Jaguar may seek additional capital due to favorable market conditions or strategic considerations even if Jaguar believes it has sufficient funds for its current or future operating plans. Jaguar may also not be successful in entering into partnerships that include payment of upfront licensing fees for its products and product candidates for markets outside the United States, where appropriate. If Jaguar does not generate upfront fees from any anticipated arrangements, it would have a negative effect on Jaguar's operating plan. Jaguar plans to finance its operations and capital funding needs through equity and/or debt financing as well as revenue from future product sales. However, there can be no assurance that additional funding will be available to Jaguar on acceptable terms on a timely basis, if at all, or that Jaguar will generate sufficient cash from operations to adequately fund operating needs or ultimately achieve profitability. If Jaguar is unable to obtain an adequate level of financing needed for the long-term development and commercialization of its products, it will need to curtail planned activities and reduce costs. Doing so will likely have an adverse effect on Jaguar's ability to execute on its business plan.

Cash Flows for the Three Months Ended March 31, 2017 Compared to the Three Months Ended March 31, 2016

The following table shows a summary of cash flows for the three months ended March 31, 2017 and 2016:

	Three Months Ended March 31,	
	2017	**2016**
Total cash used in operations	$ (288,720)	$ (4,527,858)
Total cash provided by investing activities	490,101	93,017
Total Cash Provided by Financing Activities	52,701	3,951,362
	$ 254,082	$ (483,479)

Cash Used in Operating Activities

During the three months ended March 31, 2017, cash used in operating activities of $289,000 resulted from Jaguar's net loss of $4.7 million, offset by non-cash accretion of end of term payment, debt discounts and debt issuance costs of $97,000, stock-based compensation of $228,000, change in the fair value of warrants of $453,000, loss on extinguishment of debt of $208,000, depreciation expense of $15,000, net of changes in operating assets and liabilities of $3.4 million.

During the three months ended March 31, 2016, cash used in operating activities resulted from Jaguar's net loss of $4.0 million, offset by non-cash accretion of debt discounts and debt issuance costs of $131,000, stock-based compensation of $104,000, depreciation expense of $8,000, net of changes in operating assets and liabilities of $786,000.

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Cash Provided By/Used In Investing Activities

During the three months ended March 31, 2017, cash provided by investing activities of $490,000 consisted of $490,000 of a release of restricted cash that resulted from a reduction in Jaguar's long-term debt.

During the three months ended March 31, 2016, cash provided by investing activities primarily consisted of $179,000 of a release of restricted cash that resulted from principal payments on Jaguar's long-term debt, net of $86,000 in purchases of property and equipment.

Cash Provided by Financing Activities

During the three months ended March 31, 2017, cash provided by financing activities of $53,000 primarily consisted of $543,000 in net proceeds received in the CSPA, offset by $490,000 in principal payments on Jaguar's long-term debt.

During the three months ended March 31, 2016, cash provided by financing activities primarily consisted $4.1 million in net cash received in Jaguar's secondary public offering, net of commissions and certain deferred offering costs, offset by a $179,000 repayment of principal related to Jaguar's long-term debt.

Cash Flows for Year Ended December 31, 2016 Compared to the Year Ended December 31, 2015

The following table shows a summary of cash flows for the years ended December 31, 2016 and 2015:

	Years Ended December 31,	
	2016	**2015**
Total cash used in operations	$ (14,413,718)	$ (14,315,863)
Total cash provided by/(used in) investing activities	2,384,500	(3,002,700)
Total Cash Provided by Financing Activities	5,282,666	24,170,902
	$ (6,746,552)	$ 6,852,339

Cash Used in Operating Activities

During the year ended December 31, 2016, cash used in operating activities of $14.4 million resulted from Jaguar's net loss of $14.7 million, offset by non-cash accretion of end of term payment, debt discounts and debt issuance costs of $510,000, stock-based compensation of $718,000, loss on extinguishment of debt of $108,000, depreciation expense of $47,000, net of changes in operating assets and liabilities of $1.1 million.

During the year ended December 31, 2015, cash used in operating activities of $14.3 million resulted from Jaguar's net loss of $16.3 million, offset by non-cash accretion of debt discounts of $2.5 million, non-cash revaluation of warrant liability of $502,000 and stock-based compensation of $992,000, amortization of debt issuance costs of $130,000, accretion of the balloon payment on the long-term debt of $116,000, loss on the sale of property and equipment of $35,000, depreciation expense of $5,000, net of changes in operating assets and liabilities of $2.3 million.

Cash Provided By/Used In Investing Activities

During the year ended December 31, 2016, cash provided by investing activities of $2.4 million primarily consisted of $2.5 million of a release of restricted cash that resulted from a reduction in Jaguar's long-term debt, net of $104,000 in purchases of property and equipment.

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During the year ended December 31, 2015, cash used in investing activities of $3.0 million primarily consisted of $3.0 million in restricted cash that resulted from Jaguar's issuance of long-term debt, $23,000 from the purchase of property and equipment, net of $21,000 from the sale of property and equipment.

Cash Provided by Financing Activities

During the year ended December 31, 2016, cash provided by financing activities of $5.3 million primarily consisted of $4.1 million in net cash received in Jaguar's secondary public offering, net of commissions and certain offering expenses, $2.6 million in net proceeds received in the CSPA, $150,000 in net proceeds from an additional common stock purchase agreement, and $903,000 in net cash received in the sale of common stock to various investors as part of the 2016 Private Placement offset by $2.5 million in principal payments on its long-term debt.

During the year ended December 31, 2015, cash provided by financing activities 24.2 million primarily consisted of the gross proceeds from the issuance of $5.6 million in long-term debt, net of discounts and debt issuance costs, $1.3 million in convertible promissory notes, offset by $1.1 million in repayments thereof, and $18.4 million in net cash was provided related to Jaguar's initial public offering, net of commissions and certain deferred offering costs, offset by the repayment of the $1.0 million bridge loans and $100,000 in convertible notes.

Description of Indebtedness

Convertible Notes and Warrants

2013 Convertible Notes

From July through September 2013, Jaguar issued four convertible promissory notes (collectively the "Notes") for gross aggregate proceeds of $525,000 to various third-party lenders. The Notes bore interest at 8% per annum. The Notes automatically matured and the entire outstanding principal amount, together with accrued interest, was due and payable in cash at the earlier of July 8, 2015 (the "Maturity Date") or ten business days after the date of consummation of the initial closing of a first equity round of financing. Jaguar consummated a first equity round of financing prior to the Maturity Date with a pre-money valuation of greater than $3.0 million, and, accordingly, principal and accrued interest was converted into shares of common stock at 75% of the purchase price paid by such equity investors. These notes were all converted to common stock in February 2014 upon the issuance of the convertible preferred stock. In February 2014, in connection with the first equity round of financing and issuance of the Series A convertible preferred stock, the noteholders exercised their option to convert their Notes into 207,664 shares of common stock and accrued interest was paid in cash to the noteholders. The accreted interest expense related to the discount on the Notes was $1,443 for the period from January 1, 2014 to the conversion date of the Notes. Upon conversion, the entire remaining debt discount of $4,071 was recorded as interest expense.

In connection with the Notes, Jaguar issued warrants to the noteholders, which became exercisable to purchase an aggregate of 207,664 shares of common stock as of the issuance of the first equity round of financing (the "Warrants"). The Warrants have a $2.53 exercise price, are fully exercisable from the initial date of the first equity round of financing, and have a five-year term subsequent to that date. The warrants were fully expensed prior to 2016.

2014 Convertible Notes

On June 2, 2014, pursuant to a convertible note purchase agreement, Jaguar issued convertible promissory notes in the aggregate principal amount of $300,000 to two accredited investors, including a convertible promissory note for $200,000 to a board member to which Series A preferred stock was

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sold. These notes accrued interest at 3% per annum and automatically were to mature on June 1, 2015. Interest expense for the year ended December 31, 2015 was $3,237 and is included in interest expense in the statement of operations and comprehensive loss. Accrued interest is $8,507 and is included in accrued liabilities in the balance sheet. All interest was to be paid in cash upon maturity. Upon the closing of the IPO, the outstanding principal amount automatically converted into 53,571 shares common stock at $5.60, as amended in March 2015. Upon issuance, Jaguar analyzed the beneficial nature of the conversion terms and determined that a beneficial conversion feature, or BCF, existed because the effective conversion price on issuance of the notes was less than the fair value at the time of the issuance. Jaguar calculated the value of the BCF using the intrinsic method and recorded a BCF of $75,000 as a discount to notes payable and to additional paid-in capital. For the year ended December 31, 2015, Jaguar amortized $31,250 of the discount as interest expense in the statements of operations and comprehensive loss.

On July 16, 2014, pursuant to a convertible note purchase agreement, Jaguar issued a convertible promissory note in the principal amount of $150,000 to an accredited investor. This note accrued interest at 3% per annum and automatically was to mature on June 1, 2015. Interest expense for the year ended December 31, 2015 was $1,627 and is included in interest expense in the statements of operations and comprehensive loss. Accrued interest is $3,711 and is included in accrued liabilities in the balance sheet. All interest was to be paid in cash upon maturity. Upon the closing of the Jaguar's IPO, the outstanding principal amount automatically converted into 26,785 shares of common stock at $5.60, as amended in March 2015. Upon issuance, Jaguar analyzed the beneficial nature of the conversion terms and determined that a BCF existed because the effective conversion price was less than the fair value at the time of the issuance. Jaguar calculated the value of the BCF using the intrinsic method and recorded a BCF of $37,500 as a discount to the notes payable and to additional paid-in capital. For the year ended December 31, 2015, Jaguar amortized $17,857 of the discount as interest expense in the statements of operations and comprehensive loss.

In connection with the Transfer Agreement (Note 6) Jaguar issued fully vested and immediately exercisable warrants to the Manufacturer to purchase 16,666 shares of common stock at 90% of the IPO price, amended to $6.30 in March 2015, for a period of five years. The fair value of the warrants, $37,840, was recorded as research and development expense and additional paid-in capital in June 2014. The warrants were originally valued using the Black-Scholes model with the following assumptions: stock price of $4.83, exercise price of $4.35, term of five years, volatility of 49%, dividend yield of 0%, and risk-free interest rate of 1.64%.

On December 23, 2014, pursuant to a convertible note purchase agreement, Jaguar issued convertible promissory notes in the aggregate principal amount of $650,000 to three accredited investors, including a convertible promissory note for $250,000 to the same board member to which the June 2, 2014 $200,000 convertible promissory note was issued and to which Series A preferred stock was sold. These notes accrued interest at 12% per annum and became payable within thirty days following the IPO. Interest expense for the year ended December 31, 2015 was $28,210 and is included in interest expense in the statements of operations and comprehensive loss. Accrued interest is $30,132 and is included in accrued liabilities in the balance sheet. All interest was to be paid in cash upon maturity. Upon consummation of Jaguar's IPO, the noteholders converted the notes into 116,070 shares of common stock at a conversion price equal to 80% of the IPO price, amended to $5.60 in March 2015. In connection with these notes, Jaguar also issued the lenders a fully vested warrant to purchase shares of Jaguar common stock at an exercise price equal to 80% of the IPO price, amended to $5.60 in March 2015. These warrants entitle the noteholders to purchase 58,035 shares of common stock. The fair value of the warrants, $147,943, was recorded as a debt discount and liability at December 23, 2014. Jaguar amortized $141,890 of this discount in the year ended December 31, 2015 which has been recorded as interest expense in the statements of operations and comprehensive loss. The warrants were originally valued using the Black-Scholes model with the following assumptions: stock price of

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$4.59, exercise price of $4.15, term of three years expiring December 2017, volatility of 49%, dividend yield of 0%, and risk-free interest rate of 1.10%. Based on the circumstances, the value derived using the Black-Scholes model approximated that which would be obtained using a lattice model. The debt discount was amortized as interest expense over the one hundred ninety days from issuance of the notes through their first maturity date of July 31, 2015, beginning in January 2015. Jaguar analyzed the beneficial nature of the conversion terms and determined that a BCF existed because the effective conversion price was less than the fair value at the time of the issuance. Jaguar calculated the value of the BCF using the intrinsic method. A BCF of $502,057 was recorded as a discount to the notes payable and to additional paid-in capital. For the years ended December 31, 2016 and 2015, Jaguar amortized $0 and $484,329 of the BCF as interest expense in the statements of operations and comprehensive loss.

2015 Convertible Notes

In February 2015, Jaguar issued convertible promissory notes to two accredited investors in the aggregate principal amount of $250,000. These notes were issued pursuant to the convertible note purchase agreement dated December 23, 2014. In connection with the issuance of the notes, Jaguar issued the lenders warrants to purchase 22,320 shares at $5.60 per share, which expire December 31, 2017. Principal and interest of $103,912 was paid in May 2015 for $100,000 of these notes. Jaguar analyzed the beneficial nature of the conversion terms and determined that a BCF existed because the effective conversion price was less than the fair value at the time of the issuance. Jaguar calculated the value of the BCF using the intrinsic method. A BCF for the full face value was recorded as a discount to the notes payable and to additional paid-in capital. For the years ended December 31, 2016 and 2015, Jaguar amortized $0 and $250,000 of the BCF as interest expense in its statement of operations and comprehensive income.

2017 Convertible Note

On June 29, 2017, Jaguar entered into a definitive agreement (sometimes referred to herein as the CVP Agreement) pursuant to which Jaguar issued a convertible promissory note (sometimes referred to herein as the CVP Note) to Chicago Venture Partners, L.P. (sometimes referred to herein as CVP) in the aggregate principal amount of $2,155,000 in exchange for $1,700,000 in cash proceeds. The note will accrue interest at 8% per annum and mature on August 2, 2018. The note will be convertible into shares of Jaguar common stock at a conversion price of $1.00 per share at any time after the earlier of (i) the date that is six months after the date that CVP delivers the purchase price of the CVP Note to Jaguar (sometimes referred to herein as the CVP Note Purchase Price Date) and (ii) the effective date of the resale registration statement that Jaguar is required to file to register the resale of shares issuable upon conversion of the CVP Note (sometimes referred to herein as the Resale S-1 Effective Date).

In addition, beginning on the earlier of (i) Resale S-1 Effective Date and (ii) the CVP Note Purchase Price Date, CVP will have the right to redeem a portion of the outstanding balance of the CVP Note in any amount up to $350,000 per month. If redemption is made prior to the six-month anniversary of the CVP Note Purchase Price Date, the redemption must be satisfied in Jaguar stock. After the six-month anniversary of the CVP Note Purchase Price Date, the redemption(s) may be satisfied in cash or stock, as the election of Jaguar; provided, however, that if Jaguar stock is trading below $1.15 per share, the redemption must be in cash.

CVP will also execute with Hercules Technology Growth Capital, Inc. (sometimes referred to herein as Hercules) an option agreement in form and substance satisfactory to Hercules which will provide CVP with the right to purchase 100% of the debt under Jaguar's term loan so long as the purchase includes the full pay-out of funds owed to Hercules under the term loan at such time.

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Effective upon CVP's purchase of such debt or upon such time that such debt is otherwise repaid in full, CVP will receive a security interest in substantially all of Jaguar's assets.

Extinguishment of debt

The remaining outstanding note of $150,000 is payable to the investor at an effective simple interest rate of 12% per annum, and was due in full on July 31, 2016. On July 28, 2016, Jaguar entered into an amendment to extend the repayment of the principal and related interest under the terms of the remaining note from July 31, 2016 to October 31, 2016. On November 8, 2016, Jaguar entered into an amendment to further extend the maturity date of the remaining note from October 31, 2016 to January 1, 2017. In exchange for the extension of the maturity date, on November 8, 2016, Jaguar's board of directors granted the lender a warrant to purchase 120,000 shares of Jaguar common stock for $0.01 per share. The warrant is exercisable at any time on or before July 28, 2022, the expiration date of the warrant.

The amendment and related warrant issuance resulted in Jaguar's treating the debt as having been extinguished and replaced with new debt for accounting purposes. Jaguar calculated a loss on the extinguishment of debt of $208,000, or the equivalent to the fair value of the warrants granted, which is included in other expense in the statements of operations and comprehensive loss.

The $150,000 note is included in notes payable in the balance sheet. Jaguar accrued interest of $38,367 and $33,929, which is included in accrued liabilities in the balance sheet as of March 31, 2017 and December 31, 2016, respectively, and incurred $4,438 and $4,488 in interest expense in the three months ended March 31, 2016 and 2015, respectively.

On December 28, 2016, Jaguar entered into an amendment to further extend the maturity date of the note from January 1, 2017 to January 31, 2017. On January 31, 2017, Jaguar entered into an amendment to further extend the due date of the $150,000 convertible note payable from January 31, 2017 to January 1, 2018.

In March 2015, Jaguar entered into a non-binding letter of intent with an investor. In connection therewith, the investor paid Jaguar $1.0 million. At March 31, 2015, Jaguar had recorded this amount as a loan advance on the balance sheet. In April 2015, the investor purchased $1.0 million of convertible promissory notes from Jaguar, the terms of which provided that such notes were to be converted into shares of Jaguar common stock upon the closing of an IPO at a conversion price of $5.60 per share. In connection with the purchase of the notes, Jaguar issued the investor a warrant to purchase 89,285 shares at $5.60 per share, which expires December 31, 2017. The notes accrued simple interest of 12% per annum and, upon consummation of Jaguar's IPO in May 2015, converted into 178,571 shares of Jaguar common stock. Jaguar analyzed the beneficial nature of the conversion terms and determined that a BCF existed because the effective conversion price was less than the fair value at the time of the issuance. Jaguar calculated the value of the BCF using the intrinsic method. A BCF of for the full face value was recorded as a discount to the notes payable and to additional paid-in capital. The full amount of the BCF was amortized to interest expense by the end of June 2015. While the note was converted to equity, Jaguar has not yet remitted the related accrued interest of $17,753, which is included in accrued liabilities on Jaguar's balance sheet.

As of March 31, 2017 and 2016, the convertible notes payable obligations were as follows:

	March 31, 2017	March 31, 2016
Notes payable	$ 150,000	$ 150,000
Unamortized note discount		
Net debt obligation	$ 150,000	$ 150,000

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Interest expense on the convertible notes for the three months ended March 31, 2017 and 2016 was as follows:

	Three months Ended March 31,	
	2017	2016
Interest expense	$ 4,438	$ 4,488

Interest payable on the convertible notes at March 31, 2017 and December 31, 2016 was as follows:

	March 31, 2017	December 31, 2016
Interest Payable:	$ 98,486	$ 94,048

Notes Payable Bridge Loans

On October 30, 2014, Jaguar entered into a standby bridge financing agreement with two lenders, which was amended and restated on December 3, 2014, which provided a loan commitment in the aggregate principal amount of $1.0 million (the "Bridge"). Proceeds to Jaguar were net of a $100,000 debt discount under the terms of the Bridge and net of $104,000 of debt issuance costs. This debt discount and debt issuance costs were recorded as interest expense using the effective interest method, over the six month term of the Bridge. The Bridge became payable upon the IPO. The Bridge was repaid in May 2015, including interest thereon in an amount of $1,321,600. In connection with the Bridge, the lenders were granted warrants to purchase 178,569 shares of Jaguar common stock determined by dividing $1.0 million by the exercise price of 80% of the IPO price, amended to $5.60 in March 2015. The fair value of the warrants, $505,348, was originally recorded as a debt discount and liability at December 3, 2014. The warrants were originally valued using the Black-Scholes model with the following assumptions: stock price of $5.01, exercise price of $5.23, term of five years expiring December 2019, volatility of 63%, dividend yield of 0%, and risk-free interest rate of 1.61%. Based on the circumstances, the value derived using the Black-Scholes model approximated that which would be obtained using a lattice model. The debt discount was recorded as interest expense over the six month term of the Bridge. Of the aggregate debt discount of $605,348 (warrants and original $100,000 discount), $521,291 was recorded as interest expense during the year ended December 31, 2015. Additional financing costs of $104,000 were incurred related to the Bridge and deferred on closing. These were recognized as interest expense over the six-month term of the Bridge using the effective interest method. Jaguar amortized the remaining $86,667 of these deferred financing charges by the end of May 2015 was recorded the amortized amounts as interest expense. Jaguar fully extinguished the debt and accrued interest in May 2015.

Standby Line of Credit

In August 2014, Jaguar entered into a standby line of credit with an accredited investor for up to $1.0 million pursuant to a Line of Credit and Loan Agreement dated August 26, 2014. In connection with the entry into the standby line of credit, Jaguar issued the lender a fully vested warrant to purchase 33,333 shares of common stock at an exercise price equal to 80% of the IPO price, amended to $5.60 in March 2015, which expires in August 2016. The fair value of the warrants, $114,300, was recorded as interest expense and additional paid-in capital in August 2014. The warrants were originally valued using the Black-Scholes model with the following assumptions: stock price of $8.00, exercise price of $6.40, term of two years, volatility of 52%, dividend yield of 0%, and risk-free interest rate of 0.52%. The line of credit expired on March 31, 2015 and there were no drawdowns under the facility. The warrants expired in August 2016.

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Long-term Debt

In August 2015, Jaguar entered into a loan and security agreement with a lender for up to $8.0 million, which provided for an initial loan commitment of $6.0 million. The loan agreement requires Jaguar to maintain $4.5 million of the proceeds in cash, which may be reduced or eliminated on the achievement of certain milestones. An additional $2.0 million is available contingent on the achievement of certain further milestones. The agreement has a term of three years, with interest only payments through February 29, 2016. Thereafter, principal and interest payments will be made with an interest rate of 9.9%. Additionally, there will be a balloon payment of $560,000 on August 1, 2018. This amount is being recognized over the term of the loan agreement and the effective interest rate, considering the balloon payment, is 15.0%. Proceeds to Jaguar were net of a $134,433 debt discount under the terms of the loan agreement. This debt discount is being recorded as interest expense, using the interest method, over the term of the loan agreement. Under the agreement, Jaguar is entitled to prepay principal and accrued interest upon five days prior notice to the lender. In the event of prepayment, Jaguar is obligated to pay a prepayment charge. If such prepayment is made during any of the first twelve months of the loan agreement, the prepayment charge will be (a) during such time as Jaguar is required to maintain a minimum cash balance, 2% of the minimum cash balance amount plus 3% of the difference between the amount being prepaid and the minimum cash balance, and (b) after such time as Jaguar is no longer required to maintain a minimum cash balance, 3% of the amount being prepaid. If such prepayment is made during any time after the first twelve months of the loan agreement, 1% of the amount being prepaid.

On April 21, 2016, the loan and security agreement was amended upon which Jaguar repaid $1.5 million of the debt out of restricted cash. The amendment modified the repayment amortization schedule providing a four-month period of interest only payments for the period from May through August 2016.

Jaguar plans to use $1.0 million of the cash proceeds from the issuance of the CVP Note to prepay principal on the loan. Jaguar will then make interest only payments on the loan through October 21, 2017, at which time principal and interest payments will resume.The CVP Agreement will provide CVP with the option to purchase the loan at any time at the then-current outstanding balance of the loan. If the loan is not purchased in full by October, 31, 2017, then the balloon payment due to the lender from Jaguar at the maturity of the loan will increase by $40,000.

According to the CVP Agreement, CVP will execute and deliver to the lender a subordination agreement that will provide, among other things, that the obligations of Jaguar under the CVP Note will be subordinated to the obligations of Jaguar to the lender and its affiliates. The subordination agreement will also provide CVP with the right to purchase 100% of the debt under Jaguar's term loan so long as the purchase includes the full pay-out of funds owed to such lender under the term loan at such time. Effective upon CVP's purchase of such debt or upon such time that such debt is otherwise repaid in full, CVP will receive a security interest in substantially all of Jaguar's assets.

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As of March 31, 2017 and December 31, 2016, the net long-term debt obligation was as follows:

	March 31, 2017	December 31, 2016
Debt and unpaid accrued end-of-term payment	$ 3,452,874	$ 3,894,320
Unamortized note discount	(30,816)	(42,493)
Unamortized debt issuance costs	(95,340)	(114,626)
Net debt obligation	$ 3,326,718	$ 3,737,201
Current portion of long-term debt	$ 1,994,015	$ 1,919,675
Long-term debt, net of discount	1,332,703	1,817,526
Total	$ 3,326,718	$ 3,737,201

Future principal payments under the long-term debt are as follows:

Years ending December 31	Amount
2017 - April through December	$ 1,541,946
2018	1,479,246
Total future principal payments	3,021,192
2018 end-of-term payment	560,000
	3,581,192
Less: unaccreted end-of-term payment at March 31, 2017	(128,318)
Debt and unpaid accrued end-of-term payment	$ 3,452,874

As of December 31, 2016 and 2015, the net long-term debt obligation was as follows:

	December 31, 2016	December 31, 2015
Debt and unpaid accrued end-of-term payment	$ 3,894,320	$ 6,115,797
Unamortized note discount	(42,493)	(106,635)
Unamortized debt issuance costs	(114,626)	(206,235)
Net debt obligation	$ 3,737,201	$ 5,802,927
Current portion of long-term debt	$ 1,919,675	$ 1,707,899
Long-term debt, net of discount	1,817,526	$ 4,095,028
Total	$ 3,737,201	$ 5,802,927

Future principal payments under the long-term debt are as follows:

Years ending December 31	Amount
2017	$ 2,032,048
2018	1,479,246
Total future principal payments	3,511,294
2018 end-of-term payment	560,000
	4,071,294
Less: unaccreted end-of-term payment at December 31, 2016	(176,974)
Debt and unpaid accrued end-of-term payment	$ 3,894,320

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The obligation at December 31, 2015 includes an end-of-term payment of $560,000, which accretes over the life of the loan as interest expense. As a result of the debt discount and the end-of-term payment, the effective interest rate for the loan differs from the contractual rate.

Interest expense on the long-term debt for the years ended March 31, 2017 and 2016 was as follows:

	Three months ended March 31,	
	2017	2016
Nominal Interest	$ 78,861	$ 148,626
Amortization of debt issuance costs	11,678	18,411
Accretion of end-of-term payment	48,655	76,696
Debt issuance costs	36,439	36,016
	$ 175,633	$ 279,749

Interest expense on the long-term debt for the years ended December 31, 2016 and 2015 was as follows:

	December 31, 2016	December 31, 2015
Nominal Interest	$ 457,448	$ 224,400
Amortization of debt discount	64,142	27,798
Accretion of end-of-term payment	267,230	115,797
Debt issuance costs	178,713	43,789
	$ 967,533	$ 411,784

At the IPO, Jaguar's outstanding warrants to purchase convertible preferred stock were all converted to warrants to purchase common stock.

Warrants

On November 22, 2016, Jaguar entered into a Securities Purchase Agreement, or the 2016 Purchase Agreement, with certain institutional investors, pursuant to which Jaguar sold securities to such investors in a private placement transaction, which Jaguar refers to herein as the 2016 Private Placement. In the 2016 Private Placement, Jaguar sold an aggregate of 1,666,668 shares of Jaguar common stock at a price of $0.60 per share for net proceeds of $677,224 or gross proceeds of approximately $1.0 million less $322,777 in issuance costs. The investors in the 2016 Private Placement also received (i) warrants to purchase up to an aggregate of 1,666,668 shares of Jaguar common stock, at an exercise price of $0.75 per share, or the Series A Warrants, (ii) warrants to purchase up to an aggregate 1,666,668 shares of Jaguar common stock, at an exercise price of $0.90 per share, or the Series B Warrants, and (iii) warrants to purchase up to an aggregate 1,666,668 shares of Jaguar common stock, at an exercise price of $1.00 per share, or the Series C Warrants and, together with the Series A Warrants and the Series B Warrants, the 2016 Warrants. The issuance costs were allocated to

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common stock, Series A Warrants, and Series B and C Warrants based on the relative fair value of each:

Instruments	Fair Value	% Allocation	Issuance Costs (allocated)
Common Stock	$ 156,522	16%	$ 50,522
Warrants (Series A)	700,001	70%	225,944
Warrants (Series B and C)	143,478	14%	46,311
Total	$ 1,000,001	100%	$ 322,777

Common stock of a net $106,000 (fair value less issuance costs) was included in equity in Jaguar's balance sheet. Series A Warrants of $756,001, consisting of the Series A warrants of $700,001 and the Series A placement agent warrants of $56,000, are included in current liabilities in the balance sheet and the $225,944 of issuance cost was expensed and is in general and administrative expense on the statement of operations and comprehensive loss. Series B and C warrants of a net $97,167 (fair value less issuance costs) are included in equity in Jaguar's balance sheet.

Jaguar's warrant share activity is summarized as follows:

	Three Months Ended March 31, 2017	Year Ended December 31, 2016	Year Ended December 31, 2015
Beginning balance	5,968,876	748,872	494,267
Warrants granted	370,916	5,253,337	254,605
Warrants cancelled		(33,333)	
Ending balance	6,339,792	5,968,876	748,872

Off-Balance Sheet Arrangements

Since inception, Jaguar has not engaged in the use of any off-balance sheet arrangements, such as structured finance entities, special purpose entities or variable interest entities.

Critical Accounting Policies and Significant Judgments and Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles, or U.S. GAAP, requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses, and related disclosures in the financial statements. Critical accounting policies are those accounting policies that may be material due to the levels of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change, and that have a material impact on financial condition or operating performance. While Jaguar bases its estimates and judgments on its experience and on various other factors that it believes to be reasonable under the circumstances, actual results may differ from these estimates under different assumptions or conditions. Jaguar believes the following critical accounting policies used in the preparation of its financial statements require significant judgments and estimates. For additional information relating to these and other accounting policies, see Note 2 to Jaguar's audited financial statements, appearing elsewhere in this joint proxy statement/prospectus.

Accrued Research and Development Expenses

As part of the process of preparing Jaguar's financial statements, Jaguar is required to estimate accrued research and development expenses. Estimated accrued expenses include fees paid to vendors and clinical sites in connection with Jaguar's clinical trials and studies. Jaguar reviews new and open contracts and communicates with applicable internal and vendor personnel to identify services that have

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been performed on its behalf and estimates the level of service performed and the associated costs incurred for the service when Jaguar has not yet been invoiced or otherwise notified of the actual cost for accrued expenses. The majority of Jaguar's service providers invoice Jaguar monthly in arrears for services performed or as milestones are achieved in relation to its contract manufacturers. Jaguar makes estimates of its accrued expenses as of each reporting date.

Jaguar bases its accrued expenses related to clinical trials and studies on its estimates of the services received and efforts expended pursuant to contracts with vendors, Jaguar's internal resources, and payments to clinical sites based on enrollment projections. The financial terms of the vendor agreements 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 enrollment of animals and the completion of development milestones. Jaguar estimates the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from Jaguar's estimate, Jaguar adjusts the related expense accrual accordingly on a prospective basis. If Jaguar does not identify costs that have been incurred or if it underestimates or overestimates the level of services performed or the costs of these services, its actual expenses could differ from its estimates. To date, Jaguar has not made any material adjustments to its estimates of accrued research and development expenses or the level of services performed in any reporting period presented.

Jaguar expenses the total cost of a certain long-term manufacturing development contract ratably over the estimated life of the contract, or the total amount paid if greater.

Accounting for Stock-Based Compensation

Beginning in the second quarter of 2014, Jaguar awarded options and restricted stock units. Jaguar measures stock-based awards granted to employees and directors at fair value on the date of grant and recognizes the corresponding compensation expense of the awards, net of estimated forfeitures, over the requisite service periods, which correspond to the vesting periods of the awards. Jaguar revalues non-employee options each reporting period using the fair market value of Jaguar's common stock as of the last day of each reporting period.

Key Assumptions. Jaguar's Black-Scholes-Merton option-pricing model requires the input of highly subjective assumptions, including the fair value of the underlying common stock, the expected volatility of the price of Jaguar common stock, the expected term of the option, risk-free interest rates and the expected dividend yield of Jaguar common stock. These estimates involve inherent uncertainties and the application of management's judgment. If factors change and different assumptions are used, Jaguar's stock-based compensation expense could be materially different in the future. These assumptions are estimated as follows:

Fair value of Jaguar common stock Jaguar common stock is valued by reference to the publicly-traded price of Jaguar common stock.

Expected volatility As Jaguar does not have any trading history for Jaguar common stock, the expected stock price volatility for Jaguar common stock was estimated by taking the average historic price volatility for industry peers based on daily price observations for common stock values over a period equivalent to the expected term of Jaguar's stock option grants. Jaguar did not rely on implied volatilities of traded options in its industry peers' common stock because the volume of activity was relatively low. Jaguar intends to continue to consistently apply this process using the same or similar public companies until a sufficient amount of historical information regarding the volatility of Jaguar's own common stock share price becomes available.

Expected term The expected term represents the period that Jaguar's stock-based awards are expected to be outstanding. It is based on the "simplified method" for developing the estimate

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of the expected life of a "plain vanilla" stock option. Under this approach, the expected term is presumed to be the midpoint between the average vesting date and the end of the contractual term for each vesting tranche. Jaguar intends to continue to apply this process until a sufficient amount of historical exercise activity is available to be able to reliably estimate the expected term.

Risk-free interest rate The risk-free interest rate is based on the yields of U.S. Treasury securities with maturities similar to the expected term of the options for each option group.

Dividend yield Jaguar has never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future. Consequently, Jaguar used an expected dividend yield of zero.

Forfeitures Jaguar estimates forfeitures at the time of grant and revises those estimates periodically in subsequent periods. Jaguar uses historical data to estimate pre-vesting option forfeitures and records stock-based compensation expense only for those awards that are expected to vest.

Common Stock Valuations. Prior to Jaguar's IPO, the fair value of the common stock underlying Jaguar's stock options was determined by its board of directors, which intended all options granted to be exercisable at a price per share not less than the per share fair value of Jaguar common stock underlying those options on the date of grant. The valuations of Jaguar common stock were determined in accordance with the guidelines outlined in the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. The assumptions Jaguar used in the valuation model are highly complex and subjective. Jaguar bases its assumptions on future expectations combined with management judgment. In the absence of a public trading market, Jaguar board of directors, with input from management, exercised significant judgment and considered numerous objective and subjective factors to determine the fair value of Jaguar common stock as of the date of each option grant and stock award. These judgments and factors will not be necessary to determine the fair value of new awards once the underlying shares begin trading. For now Jaguar included the following factors:

the prices, rights, preferences and privileges of Jaguar Series A preferred stock relative to those of Jaguar common stock;

lack of marketability of Jaguar common stock;

Jaguar's actual operating and financial performance;

current business conditions and projections;

hiring of key personnel and the experience of Jaguar's management;

Jaguar's stage of development;

illiquidity of share-based awards involving securities in a private company;

the U.S. capital market conditions; and

the likelihood of achieving a liquidity event, such as an offering or a merger or acquisition of Jaguar given prevailing market conditions.

The fair market value per share of Jaguar common stock for purposes of determining stock-based compensation is now the closing price of Jaguar common stock as reported on The NASDAQ Stock Market on the applicable grant date.

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Classification of Securities

Jaguar applies the principles of ASC 480-10 "Distinguishing Liabilities From Equity" and ASC 815-40 "Derivatives and Hedging Contracts in Entity's Own Equity" to determine whether financial instruments such as warrants, contingently issuable shares and shares subject to repurchase should be classified as liabilities or equity and whether beneficial conversion features exist. Financial instruments such as warrants that are evaluated to be classified as liabilities are fair valued upon issuance and are remeasured at fair value at subsequent reporting periods with the resulting change in fair value recorded in other income/(expense). The fair value of warrants is estimated using the Black Scholes Merton model and requires the input of subjective assumptions including expected stock price volatility and expected life.

Income Taxes

As of December 31, 2016, Jaguar had net operating loss carryforwards for federal and state income tax purposes of $24.5 million and $17.1 million, respectively, which will begin to expire in 2033, subject to limitations. Jaguar's management has evaluated the factors bearing upon the realizability of its deferred tax assets, which are comprised principally of net operating loss carryforwards. Jaguar's management concluded that, due to the uncertainty of realizing any tax benefits as of December 31, 2016, a valuation allowance was necessary to fully offset its deferred tax assets. Jaguar has evaluated its uncertain tax positions and determined that it has no liabilities from unrecognized tax benefits and therefore it has not incurred any penalties or interest. The Tax Reform Act of 1986, as amended, limits the use of net operating loss and tax credit carryforward in certain situations where changes occur in the stock ownership of a company. Utilization of the domestic NOL and tax credit forwards may be subject to a substantial annual limitation due to ownership change limitations that may have occurred or that could occur in the future, as required by the Internal Revenue Code Section 382, as well as similar state provisions.

Recent Accounting Pronouncements

In November 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2016-18, Statement of Cash Flows: Restricted Cash, or ASU 2016-18, that will require entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and restricted cash equivalents in the statement of cash flows. When cash, cash equivalents, restricted cash and restricted cash equivalents are presented in more than one line item on the balance sheet, the new guidance requires a reconciliation of the totals in the statement of cash flows to the related captions in the balance sheet. This reconciliation can be presented either on the face of the statement of cash flows or in the notes to the financial statements. Entities will also have to disclose the nature of their restricted cash and restricted cash equivalent balances. ASU 2016-18 becomes effective for fiscal years beginning after December 15, 2017, and interim periods within those years, with early adoption permitted. Any adjustments must be reflected as of the beginning of the fiscal year that includes that interim period. The adoption of this standard is not expected to have an impact on Jaguar's financial position or results of operations.

In August 2016, the FASB issued Accounting Standards Update, or ASU, No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments, which addresses the following cash flow issues: (1) debt prepayment or debt extinguishment costs; (2) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (3) contingent consideration payments made after a business combination; (4) proceeds from the settlement of insurance claims; (5) proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies; (6) distributions received from equity method investees; (7) beneficial interests in securitization

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transactions; and (8) separately identifiable cash flows and application of the predominance principle. The amendments in this ASU are effective for public business entities for fiscal years beginning after December 15, 2017 and interim periods within those fiscal years and are effective for all other entities for fiscal years beginning after December 15, 2018 and interim periods within fiscal years beginning after December 15, 2019. Early adoption is permitted, including adoption in an interim period. Jaguar is currently evaluating the impact of the adoption of ASU No. 2016-15 on its consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Compensation Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting, which simplifies several aspects of the accounting for employee stock-based payment transactions. The areas for simplification in ASU No. 2016-09 include the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The amendments in this ASU will be effective for annual periods beginning after December 15, 2016 and interim periods within those annual periods. Early adoption is permitted. Jaguar is currently evaluating the impact of the adoption of ASU No. 2016-09 on its consolidated financial statements.

In March 2016 the FASB issued ASU No. 2016-07, Investments Equity Method and Joint Ventures (Topic 323): Simplifying the Transition to the Equity Method of Accounting. This new standard eliminates the requirement that when an investment qualifies for use of the equity method as a result of an increase in the level of ownership interest or degree of influence, an adjustment must be made to the investment, results of operations and retained earnings retroactively on a step-by-step basis as if the equity method had been in effect during all previous periods that the investment has been held. T ASU 2016-07 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. Jaguar is currently evaluating the potential effects of the adoption of this update on its financial statements.

In February 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-02, Leases (Topic 842), which provides guidance for accounting for leases. Under ASU 2016-02, Jaguar will be required to recognize the assets and liabilities for the rights and obligations created by leased assets. ASU 2016-02 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. Jaguar is currently evaluating the impact of the adoption of ASU 2016-02 on its consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers." The objective of ASU 2014-19 is to establish a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and will supersede most of the existing revenue recognition guidance, including industry-specific guidance. The core principle of the new standard is that revenue should be recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard is effective for annual reporting periods beginning after December 15, 2018 and allows for prospective or retrospective application. Jaguar currently anticipates utilizing the full retrospective method of adoption allowed by the standard, in order to provide for comparative results in all periods presented, and plan to adopt the standard as of January 1, 2018. Jaguar is currently evaluating the new guidance, however Jaguar does not believe the impact will be significant.

JOBS Act

In April 2012, the JOBS Act was enacted. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. Jaguar has irrevocably

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elected not to avail ourselves of this extended transition period, and, as a result, Jaguar will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

Market Prices of and Dividends on Jaguar Common Stock

Market Information for Jaguar Common Stock

Shares of Jaguar common stock have been listed and traded on The NASDAQ Capital Market under the symbol "JAGX" since May 13, 2015. Prior to that date, there was no public market for Jaguar common stock.

The following table sets forth, for the periods indicated, the high and low intra-day sale prices in dollars on The NASDAQ Capital Market for Jaguar common stock.

Quarter Ended	High	Low
2015:		
June 30, 2015 (from May 13, 2015)	$ 7.06	$ 4.56
September 30, 2015	$ 5.48	$ 1.90
December 31, 2015	$ 4.70	$ 1.69
2016:		
March 31, 2016	$ 4.60	$ 1.35
June 30, 2016	$ 3.79	$ 1.19
September 30, 2016	$ 2.25	$ 1.09
December 31, 2016	$ 1.53	$ 0.61
2017:		
March 31, 2017	$ 1.52	$ 0.50
June 30, 2017 (through June 29, 2017)	$ 1.03	$ 0.50

As of June 26, 2017, there were approximately 23 stockholders of record of Jaguar common stock. These figures do not reflect the beneficial ownership or shares held in nominee name, nor do they include holders of any RSUs.

Dividend Policy

Jaguar has never declared or paid any cash dividends on its capital stock. Jaguar intends to retain future earnings, if any, to fund the development and growth of Jaguar's business and does not anticipate paying any cash dividends for at least the next five years, if ever. Any future determination related to dividend policy will be made at the discretion of Jaguar's board of directors after considering Jaguar's financial condition, results of operations, capital requirements, business prospects and other factors the board of directors deems relevant, and subject to any restrictions contained in our organizational documents and any current or any future financing instruments.

Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table sets forth information with respect to the beneficial ownership of Jaguar's voting securities as of June 26, 2017, the date of the table, by:

- each person known by Jaguar to beneficially own more than 5% of the outstanding shares of its common stock;
- each of Jaguar's named executive officers;
- each of Jaguar's directors; and
- all of Jaguar's directors and executive officers as a group.

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Information with respect to beneficial ownership has been furnished by each director, executive officer or beneficial owner of more than 5% of Jaguar's common stock. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting and investment power with respect to the securities. Except as otherwise provided by footnote, and subject to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of Jaguar common stock shown as beneficially owned by them. The number of shares of Jaguar common stock used to calculate the percentage ownership of each listed person includes the shares of Jaguar common stock underlying options or warrants held by such persons that are currently exercisable or exercisable within 60 days of June 26, 2017, but are not treated as outstanding for the purpose of computing the percentage ownership of any other person.

Percentage of beneficial ownership is based on 15,682,501 shares of Jaguar common stock outstanding as of June 26, 2017.

Except as otherwise set forth below, the address of each beneficial owner listed in the table below is c/o Jaguar Animal Health, Inc., 201 Mission Street, Suite 2375, San Francisco, California 94105.

Name and Address of Beneficial Owner	Title of Class	Amount and Nature of Beneficial Ownership	Percent of Class
5% Stockholders:			
Napo Pharmaceuticals, Inc.(1)	Common	2,666,666	17.0%
Entities affiliated with BVCF(2)	Common	1,570,502	10.0%
Invesco Ltd.(3)	Common	1,974,360	12.6%
Entities affiliated with Kingdon Capital Management L.L.C.(4)	Common	2,147,817	13.7%
Named executive officers and directors:			
James J. Bochnowski(5)	Common	694,213	4.4%
Lisa A. Conte(6)	Common	444,817	2.8%
Jiahao Qiu(7)	Common	8,066	*
Zhi Yang, Ph.D.(8)	Common	1,570,502	10.0%
Folkert W. Kamphuis(9)	Common	97,367	*
Steven R. King, Ph.D.(10)	Common	157,191	1.0%
John Micek III(11)	Common	45,450	*
Ari Azhir, Ph.D.(12)	Common	21,788	*
Karen S. Wright(13)	Common	45,676	*
Roger Waltzman(14)	Common	32,113	*
All current executive officers and directors as a group (10 persons)(15)	Common	3,117,183	18.6%

*
Less than 1%.

(1)
Lisa A. Conte, Jaguar's Chief Executive Officer, is the interim chief executive officer of Napo. Napo's four-person board of directors, consisting of Lisa A. Conte, Richard W. Fields, Joshua Mailman and Gregory Stock, has ownership and control of the shares of common stock held by Napo. Certain members of Jaguar's board of directors, as well as certain of Jaguar's executive officers and employees beneficially own common stock in Napo. As a group, Jaguar executive officers and directors (10 persons total), collectively beneficially own 9.8% of the issued and outstanding common stock of Napo, including the Bochnowski Family Trust, which holds 6.5%. Mr. Bochnowski, a member of Jaguar's board of directors, is a co-trustee and beneficiary of such trust and shares voting and investment control over such shares with his spouse. See "Certain Relationships and Related Transactions of Jaguar Napo Arrangements Napo Beneficial Ownership."

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(2) Includes (i) 1,483,326 shares of common stock directly held by Kunlun Pharmaceuticals, Ltd., and (ii) 39,555 shares of common stock, stock options to purchase 10,000 shares of common stock held by Dr. Yang, and warrants to purchase 39,555 shares of common stock held by Sichuan Biopharma. Kunlun Pharmaceuticals, Ltd. is wholly-owned by BVCF III, L.P. and BVCF III-A, L.P., Cayman Islands limited partnerships. BVCF III, L.P. and BVCF III-A, L.P. are managed by BioVeda Management, Ltd., a Cayman Islands company, or BVCF, and Sichuan Biopharma is an investment vehicle of BVCF. Dr. Yang is the sole shareholder of BVCF. BVCF may be deemed to beneficially own all shares held by Kunlun Pharmaceuticals, Ltd. and Sichuan Biopharma. BVCF's principal business address is Suite 2606, Tower 1, New Richport Center, 763 Mengzi Road, Huangpu District, Shanghai 200023, China.

(3) Represents 1,974,360 shares of common stock owned by Invesco Ltd.

(4) Represents 2,147,817 shares of common stock owned by Kingdon Capital Management, L.L.C. and 850,002 warrant shares that will become exercisable within 60 days of June 26, 2017.

(5) Includes (i) 487,576 shares of common stock, (ii) 85,428 shares of common stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017 and (iii) 121,209 shares of common stock issuable under warrants that are exercisable or will become exercisable within 60 days of June 21, 2017. All securities other than stock options are held by the Bochnowski Family Trust. Mr. Bochnowski is a co-trustee and beneficiary of such trust and shares voting and investment control over such shares with his spouse.

(6) Represents 5,412 shares of common stock, and 430,495 shares of stock issuable under stock options and 8,910 shares of stock issuable under restricted stock units that are exercisable or will become exercisable within 60 days of June 26, 2017.

(7) Represents 8,066 shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017.

(8) Represents 1,570,502 shares of common stock beneficially held by BVCF. Dr. Yang is the Chairperson, Founder, Managing Partner and sole shareholder of BVCF and he may be deemed to beneficially own all the shares held by BVCF.

(9) Represents 97,367 shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017.

(10) Represents 3,157 shares of common stock, and 148,837 shares of stock issuable under stock options and 5,197 shares of stock issuable under restricted stock units that are exercisable or will become exercisable within 60 days of June 26, 2017.

(11) Represents 45,450 shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017.

(12) Represents 21,788 shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017.

(13) Represents 45,676 shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017.

(14) Represents 32,113 shares of stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017.

(15)

See footnotes (5) - (14).

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NAPO MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

Napo focuses on the development and commercialization of proprietary pharmaceuticals for the global marketplace. Napo's lead product is Mytesi® (sometimes referred to herein as crofelemer), a FDA-approved antidiarrheal indicated for the symptomatic relief of non-infectious diarrhea in adult patients living with HIV/AIDS on antiretroviral therapy (sometimes referred to herein as ART). The active pharmaceutical ingredient (sometimes referred to herein as API) in Mytesi® is crofelemer, Napo's proprietary, patented gastrointestinal anti-secretory agent sustainably harvested from the rainforest.

In March 2016, Napo settled ongoing litigation with Salix Pharmaceuticals, Inc. (sometimes referred to herein as Salix) (now owned by Valeant Pharmaceuticals International) and rights to develop, manufacture and commercialize crofelemer previously licensed to Salix in December 2008 in North America, certain European Union countries and Japan were terminated and returned to Napo, along with certain crofelemer active pharmaceutical ingredient inventory, Mytesi® drug product inventory and land. Napo recorded the inventory received at its manufactured cost and the land at its appraised value and recorded a gain on settlement of litigation of $1,888,319.

Jaguar was a majority-owned subsidiary of Napo until the close of its initial public offering (sometimes referred to herein as IPO) on May 18, 2015. Jaguar was formed to develop and commercialize first-in-class gastrointestinal products for companion and production animals and horses. Jaguar's first commercial product, Neonorm Calf, was launched in 2014. On May 18, 2015, Jaguar completed an IPO of its common stock at a price to the public of $7.00 per share. In connection with the IPO, Napo deconsolidated Jaguar on this date due to a reduction in its ownership interest in Jaguar. Subsequent to the IPO, Napo owned approximately 18% and 19% of the outstanding shares of Jaguar at March 31, 2017 and December 31, 2016, respectively. Accordingly, management concluded that Napo was able to have significant influence over the operations of Jaguar. Subsequent to Jaguar's IPO, Napo has accounted for its holding in Jaguar using the equity method of accounting.

Effective July 1, 2016, Napo and Jaguar entered into an employee leasing and overhead allocation agreement (sometimes referred to herein as the 2016 Service Agreement). The initial term of the 2016 Service Agreement was from July 1, 2016 to December 31, 2016, and the term has been extended until the completion of a successful merger between the two companies, or until the proposed merger has been terminated. In connection with the 2016 Service Agreement, Jaguar provided to Napo the services of Jaguar employees, primarily in the areas of supply, manufacturing and quality control and general administrative positions. The 2016 Service Agreement stipulated that Napo reimburse Jaguar for a portion of Jaguar's overhead costs including an allocated amount for rent.

Recent Events

Merger

On March 31, 2017, Napo and Jaguar announced the signing of a definitive merger agreement (sometimes referred to herein as the merger agreement). Under the terms of merger agreement, Jaguar's stockholders and option and warrant holders calculated on a fully diluted basis as of March 31, 2017 (excluding approximately 365,437 shares issuable under securities convertible at $5.00 or more per share) will hold approximately 25% of the total outstanding fully diluted equity of Jaguar. Conversely, the balance of the outstanding fully diluted equity of Jaguar will be held by existing Napo creditors, RSU, option and warrant holders together with new convertible debt and equity investors upon consummation of the merger.

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At the effective time of the merger, each issued and outstanding share of Napo common stock (other than dissenting shares and shares held by Jaguar or Napo) will be converted into a contingent right to receive up to a whole number of shares of Jaguar common stock comprising in the aggregate up to approximately 20.2% of the fully diluted shares of Jaguar common stock immediately following the consummation of the merger, which contingent right will vest only if the resale of certain shares of Jaguar common stock (sometimes referred to herein as the Tranche A Shares) issued by Jaguar to Nantucket Investments Limited (sometimes referred to herein as Nantucket) pursuant to the Napo debt settlement provides Nantucket with specified cash returns over a specified period of time (sometimes referred to herein as the Hurdle Amounts). In addition, if such Hurdle Amount is achieved before all of such Tranche A Shares are sold, then 50% of the remaining unsold Tranche A Shares will be distributed pro rata among the Napo Stockholders and RSU holders. The proposed merger remains subject to customary conditions to closing, including but not limited to regulatory approvals inclusive of the effectiveness of the S-4 Registration Statement, debt limitations of Napo, absence of any material adverse change in the business, results of operations or condition (financial or otherwise) of either party and stockholder approval from each party.

Refinancing

On March 31, 2017, Napo entered into a settlement and discounted payoff agreement (sometimes referred to herein as the Nantucket Settlement Agreement), with the lenders party to Napo's existing financing agreement, dated as of October 10, 2014 (sometimes referred to herein as the Financing Agreement), and Nantucket, as collateral agent and administrative agent pursuant to which Napo agreed, simultaneously with the consummation of the merger, (a) to make a cash payment to Nantucket of either $8 million or $8.5 million (depending upon the percentage of outstanding common stock represented by the shares released in the following clause (b)), which will reduce the outstanding principal obligations under the Financing Agreement, and (b) in satisfaction as a compromise for the outstanding obligations under the Financing Agreement and the release of any lien or security interest in respect of such outstanding obligations, (x) to transfer to Nantucket 2,666,666 shares of Jaguar common stock owned by Napo and (y) to cause Jaguar to issue to Nantucket 2,217,579 newly issued shares of Jaguar voting common stock (sometimes referred to herein as the Remaining Tranche C Shares) and 38,180,451 newly issued shares of Jaguar non-voting common stock, which shares are subject to the terms of the Investor Rights Agreement described below.

Napo also entered into settlement agreements with Dorsar Investment Company, Alco Investment Company, Two Daughters LLC, Boies Schiller Flexner LLP and Dan Becka on or about March 31, 2017, pursuant to which Napo agreed to cause Jaguar to issue in the aggregate 4,722,567 shares of Jaguar non-voting common stock and warrants to purchase 1,224,874 shares of Jaguar common stock, with an exercise price of $0.08 per share, to such creditors upon consummation of the merger as a complete settlement and satisfaction of Napo's outstanding obligations to such creditors. Jaguar also agreed to register the resale of these shares on one or more registration statements.

In connection with the execution of the merger agreement and the Nantucket Settlement Agreement, Jaguar and Nantucket entered into an Investor Rights Agreement, dated March 31, 2017 (sometimes referred to herein as the Investor Rights Agreement) pursuant to which, among other things, Jaguar agreed to register the resale of the shares issued to Nantucket pursuant to the Nantucket Settlement Agreement on one or more registration statements. A portion of these shares will be held in escrow and released to either Nantucket or the former Napo stockholders, depending on whether Nantucket receives sufficient proceeds from the resale of the Tranche A Shares to third parties to satisfy the Hurdle Amounts. The Investor Rights Agreement also provides that Jaguar cannot pay any dividends on any shares of its capital stock or redeem any shares, except in limited circumstances, without the prior written consent of Nantucket.

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On June 27, 2017, Jaguar, Napo and Nantucket entered into the Consent, which, among other things, as a result of certain dilution that might be caused by the issuance of a convertible note as described in the exhibit to the Consent and certain stock issuances by Jaguar since entering into the merger agreement and prior to the consummation of the merger, (x) increases the Remaining Tranche C Shares from 1,940,382 shares of Jaguar voting common stock to 2,217,579 shares of Jaguar voting common stock and (y) reduces the number of Tranche B Shares from 19,900,202 shares of non-voting Jaguar common stock to 19,700,625 shares of non-voting Jaguar common stock. To the extent dilution to the Tranche A Shares as a result of such convertible note issuance or such stock issuances would result in a breach of the Investor Rights Agreement or a failure of the condition set forth in Section 2(j) of the Nantucket Settlement Agreement to be satisfied at the closing of the merger, any such breach or failure was waived by Nantucket so long as immediately after the closing of the merger, the Tranche A Shares represent no less than 18.9% of the total outstanding capital stock of Jaguar (on a fully diluted basis as defined in Section 2.1(d) of the Investor Rights Agreement as modified by the Consent).

Under the Consent, the parties also (x) agreed to increase the authorized number of shares of voting common stock under Jaguar's Third Amended and Restated Certificate of Incorporation from 175,000,000 shares to 250,000,000 shares and (y) acknowledged and agreed that the Outside Date specified in Section 10.1(b)(i) of the merger agreement be extended to July 31, 2017 and the date specified in Section 9(a) of the Nantucket Settlement Agreement be extended to July 31, 2017.

Promissory Note Issuances

On March 1, 2017, Napo entered into a convertible note purchase agreement with two lenders for the funding of $1,050,000 (face amount of $1,312,500) in two $525,000 tranches (face amount $656,250). The notes bear interest at 3% and mature on December 1, 2017. Interest may be paid at maturity in either cash or shares of Jaguar, provided that if Jaguar is not listed on Nasdaq or the Bulletin Board or registered under the Securities Act then interest must be paid in cash. Assuming the funding of $1,050,000, the notes may be exchanged for up to 2,343,752 shares of Jaguar common stock, prior to maturity date assuming that either the merger of Napo and Jaguar has occurred, among other conditions. Napo received funding of $525,000 on March 1, 2017 and on April 27 and 28 received funding of an additional $525,000 (face amount $656,250). In the three month period ended March 31, 2017, Napo recorded $131,250 of original issue discount and $25,000 of debt issuance costs and subsequently recorded, for the second tranche of funding received in April 2017, an additional $131,250 of original issue discount. Under the merger agreement, Jaguar is required to register the maximum number of shares of Jaguar common stock issuable in connection with interest payments under the promissory notes.

On March 31, 2017, Napo entered into an Amended and Restated Note Purchase Agreement (sometimes referred to herein as the Kingdon NPA) with Kingdon Associates, M. Kingdon Offshore Master Fund L.P., Kingdon Family Partnership, L.P., and Kingdon Credit Master Fund L.P. (and, together with any other party purchasing Kingdon Notes (as defined below) pursuant to the Kingdon NPA, sometimes collectively referred to herein as the Kingdon Purchasers), under which remains outstanding $2,500,000 in aggregate principal amount of convertible promissory notes (sometimes referred to herein as the Kingdon Notes) issued by Napo on December 31, 2016 to such purchasers at a purchase price of $2,000,000. Subject to the consummation of the merger, the holders of the Kingdon Notes may convert the Kingdon Notes into shares of Jaguar common stock at a conversion price of $0.925 (i) from the date of the Kingdon Note until the day immediately preceding the one-year anniversary of the Kingdon Note, all, but not less than all, of one-third of the outstanding principal and interest of the Kingdon Note, (ii) from the one-year anniversary of the Kingdon Note until the day immediately preceding the two-year anniversary of the Kingdon Note, all, but not less than all, of an additional one-third of the outstanding principal and interest of the Kingdon Note, and (iii) from the

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two-year anniversary of the Kingdon Note and thereafter, all, but not less than all, of the outstanding principal and interest of the Kingdon Note. Subject to the satisfaction of certain conditions, each Kingdon Purchaser is required to purchase its pro rata portion of additional Kingdon Notes with an aggregate original principal amount of $7,500,000 for an aggregate purchase price of $6,000,000, which subsequent purchase will occur simultaneously with the consummation of the merger and with effect as of immediately prior to the consummation of the merger.

The Kingdon Notes accrue interest at a rate of 10% per annum and mature on the first date after December 30, 2019 on which a majority of the Kingdon Purchasers have provided written notice to Napo requesting payment in full of the outstanding principal and interest of the Kingdon Notes. The obligations of Napo under the Kingdon Notes are secured pursuant to the terms of the Security Agreement, dated December 30, 2016, by and among Napo, Kingdon Capital Management L.L.C. and the purchasers named therein (sometimes referred to herein as the Napo Security Agreement) and the Limited Subordination Agreement, dated December 30, 2016, by and among Napo, the Kingdon Purchasers, Nantucket, the lenders under the Financing Agreement, Dorsar Investment Company, Alco Investment Company and Two Daughters LLC (sometimes referred to herein as the Intercreditor Agreement). Jaguar has agreed to file a registration statement to register the resale of shares of Jaguar common stock issuable upon exchange of the 2017 Exchangeable Notes within 30 days of the earlier of the effective date of the merger and the merger termination date.

Revenue

Napo began selling its drug product, Mytesi®, on consignment through one distributor in June 2016. This distributor in turn sells Mytesi to various wholesalers around the United States. Sales to the wholesalers are made under agreements that may provide price adjustments and rights of return prior to sell through. Until Napo develops sufficient sales history and pipeline visibility, revenue will be deferred until products are sold by the wholesaler to the wholesaler's customers, but the company recognizes cost of sales and reduces inventory when the distributor sells to wholesalers. Napo had $518,133, $987,312 and $390,953 of revenue (including royalties received) for the three months ended March 31, 2017 and the years ended December 31, 2016 and 2015, respectively.

Napo received royalty payments on a quarterly basis in 2015 and up to March 4, 2016. Royalties received equaled $31,729, $32,092 and $276,999 in the three months ended March 31, 2016 and in the years ended December 31, 2016 and 2015, respectively. These royalties are recognized in the period in which sales are made by the licensee.

For the three months ended March 31, 2017 and the year ended December 31, 2016, substantially all of Napo's revenue was derived from sales of Mytesi®. In the year ended December 31, 2015, the majority of Napo revenues consisted of royalties received pursuant to Napo's collaboration with Salix Pharmaceuticals, Inc., with approximately 20% of revenue derived from Jaguar sales of Neonorm Calf, Jaguar's anti-diarrheal for neo-natal calves.

Research and Development Expense

In 2015, research and development expenses consist primarily of clinical and contract manufacturing expense, personnel and related benefit expense; and, with respect to the consolidated operating results of Jaguar for the first five months of 2015, includes stock-based compensation expense, employee travel expense, reforestation expenses. Clinical and contract manufacturing expense included in operating results in 2015 consists primarily of costs to conduct stability, safety and efficacy studies, and manufacturing startup expenses.

Napo conducted limited research and development in the three months ended March 31, 2017 and the year ended December 31, 2016. Expenditures in the year ended December 31, 2015 represent

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primarily the consolidated operating results of Jaguar for the period from January to May 18, 2015. Research and development activities are projected to increase significantly in 2017 and beyond.

The timing and amount of Napo's future research and development expenses will depend largely upon its ability to attract potential development and commercialization partners, capital availability as well as the outcomes of current and future trials for its prescription drug product candidates as well as the related regulatory requirements, the outcomes of current and future formulation studies for its non-prescription products, manufacturing costs and any costs associated with the advancement of its line extension programs. Napo cannot determine with certainty the duration and completion costs of the current or future development activities.

The duration, costs and timing of trials, formulation studies and development of Napo's prescription drug will depend on a variety of factors, including:

- the scope, rate of progress, and expense of Napo's ongoing, as well as any additional clinical trials, formulation studies and other research and development activities;
- future clinical trial and formulation study results;
- potential changes in government regulations; and
- the timing and receipt of any regulatory approvals.

A change in the outcome of any of these variables with respect to the development of a prescription drug product candidate could mean a significant change in the costs and timing associated with Napo's development activities.

Napo expects research and development expense to increase significantly as it adds personnel, commences additional clinical studies and performs other activities to develop its prescription drug product candidates.

Sales and Marketing Expense

Sales and marketing expenses in the three months ended March 31, 2017 and in 2016 consist primarily of contracted amounts paid to a distribution and marketing firm and to a marketing and commercialization advisory firm, in addition to direct expenses for the promotion and marketing of Mytesi®, travel expense, and participation in conferences.

Napo expect sales and marketing expense to increase significantly as it develops and commercializes new products and grows its existing Mytesi® market. In April 2017, Napo contracted with a third party sales and marketing group to promote the sales of Mytesi® product.

General and Administrative Expenses

General and administrative expenses consist of personnel and related benefit expense, stock-based compensation expense (Jaguar only in 2015), employee travel expense, legal and accounting fees, rent and facilities expense, reimbursement of the services provided by Jaguar Animal Health personnel and related benefits expenses associated therewith, and management consulting expense.

Napo expects general and administrative expense to increase in order to enable it to effectively manage the overall growth of the business. This will include adding headcount, enhancing information systems and potentially expanding corporate facilities.

Interest Expense

Interest expense in three months ended March 31, 2017 and March 31, 2016 consists of interest expense on convertible promissory notes and interest on the principal balance and penalties associated

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with the Financing Agreement as well as in the three months ended March 31, 2017, the amortization of debt discount and issuance costs associated with convertible note and exchangeable note issuances in December 2016 and in March 2017. Interest expense in the three months ended March 31, 2017 was $2,504,718 compared to $1,705,230 in the three months ended March 31, 2016. See "Description of Indebtedness Financing Agreement."

Interest expense in 2015 and 2016 consists primarily of interest expense on convertible promissory notes and interest on the principal balance and penalties associated with the Financing Agreement. Interest expense in 2015, inclusive of Jaguar's operations, was $8,048,764, of which $6,367,471 was attributable to Napo. In 2016, interest expense was $15,609,092. See "Description of Indebtedness Financing Agreement."

Results of Operations

As a result of the settlement of its litigation with Salix and the termination of the license of crofelemer to Salix, Napo now has exclusive rights to crofelemer worldwide for the indication of diarrhea predominant irritable bowel syndrome and all other human indications, except for HIV/AIDS, adult infectious diarrhea and pediatric diarrhea in 140 countries (mainly outside of the United State, western EU countries and Japan) and China.

The manufacture and sale of Mytesi® has necessitated higher expenditures on inventory and commercialization efforts by Napo and has resulted in significant initial costs with regard to manufacturing, quality and general and administrative personnel and marketing and commercialization consultants. Napo entered into an Employee Leasing and Overhead Allocation Agreement with regard to the use of Jaguar personnel for certain of these activities.

Future development and commercialization of other indications of crofelemer will require capital far in excess of what Napo currently has and Napo therefore intends to rely on licensing opportunities as well as additional capital raises.

Napo sources the raw material for crofelemer active pharmaceutical ingredient from the Croton lechleri tree which grows in South America in countries along the Amazon Basin. Purchases are denominated in dollars, as are agreements with Napo's API contract manufacturer, based in India. Currently, Napo has only one FDA-approved manufacturer of crofelemer API, although that manufacturer is able to produce crofelemer API at two separate facilities, though one has significantly less capacity than the other. The capacity of the smaller site alone is adequate for the current levels of Mytesi sales.

Inflation has had no material effect on Napo's results for the three months ended March 31, 2017 and 2016 or for the years ended December 31, 2016 and 2015. Currently Napo does not foresee a significant effect on its operations from raw material price inflation.

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Comparison of the three month periods ended March 31, 2017 and 2016

The following table summarizes Napo's results of operations with respect to the items set forth in such table for the three months ended December 31, 2017 and 2016, together with the change in such items in dollars and as a percentage:

	Three Months Ended March 31,		Variance	
	2017	2016	($)	(%)
Revenue	$ 518,133	$ 31,729	486,404	1,533.0%
Operating Expenses				
Cost of revenue	(361,089)	(9,182)	351,907	3,832.6%
Gross profit	157,044	22,547	134,497	596.5%
Research and development expense	81,623		81,623	100%
Selling, general and administrative	1,245,319	317,758	927,561	291.9%
Total operating expenses	1,326,942	317,758	1,009,184	317.6%
Loss from operations	(1,169,898)	(295,211)	874,687	296.3%
Interest expense, net	(2,504,718)	(1,705,230)	799,488	46.9%
Gain on litigation settlement		674,578	(674,578)	(100.0)%
Gain (loss) from equity method investment in related party	746,667	(1,134,233)	1,880,900	165.8%
Net loss	$ (2,927,949)	$ (2,460,096)	467,853	19.0%

Revenue and Cost of Revenue

Revenue and related cost of revenue for the three months ended March 31, 2017 solely reflects net sales of Mytesi® by Napo. In the three months ended March 31, 2016, revenue consists of royalty income from Salix's sales of Mytesi®. Cost of revenue is comprised of the manufactured price of Mytesi®, plus the allocated costs of manufacturing and quality personnel as well as freight. Cost of revenue for Mytesi is higher as a percentage of net sales as a result of the costs of supply, quality and manufacturing personnel and continuing the establishment and implementation of quality assurance and control procedures.

Research and Development Expense

The following table presents the components of research and development expense for the three months ended March 31, 2017 and 2016, together with the change in such components in dollars and as a percentage.

	Three Months Ended March 31,			
	2017	2016	Variance	Variance %
R&D:				
Third party consulting, related benefits	$ 81,623	$ 0	$ 81,623	100%
Total	$ 81,623	$ 0	$ 81,623	100%

Research and development expense was $0 in the three months ended March 31, 2016. Such expenses increased to $81,623 for the same period in 2017, and were related to third party consulting expense provided by Jaguar personnel and independent third parties.

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Selling, General and Administrative Expense

The following table presents the components of general and administrative expense for the three months ended March 31, 2017 and 2016 together with the change in such components in dollars and as a percentage:

	Three Months Ended March 31,			
	2017	**2016**	**Variance**	**Variance %**
G&A:				
Personnel and related benefits	$ 80,192	$ 80,066	126	0.2%
Accounting fees	53,823	2,000	51,823	2,591.2%
Third-party consulting fees and Jaguar service fees	395,581	8,800	386,781	4,395.2%
Legal fees	285,516	155,189	130,327	84.0%
Travel	53,638	22,431	31,207	139.1%
Marketing, commercialization	282,762		282,762	100.0%
Other	93,807	49,272	44,535	90.3%
Total	$ 1,245,319	$ 317,758	$ 927,561	291.9%

Napo's selling, general and administrative expenses increased $927,561 from $317,758 in the three months ended March 31, 2016 to $1,245,319 for the same period in 2017. Napo's third-party consulting fees and service fees increased $386,781 from $8,800 in the three months ended March 31, 2016 compared to $395,581 in the same period in 2017. In July 2016, Napo entered into an Employee Lease and Overhead Allocation Agreement, which continued into 2017, whereby Napo was billed $262,253 for the services of Jaguar employees in the areas of quality, manufacturing, supply and other general and administrative areas in the three months ended 2017. Napo also incurred fees for regulatory consultants in the three months ended March 31, 2017 which is included in third party consulting fees. Napo had one employee in the three month periods ended March 31, 2016 and 2017. Napo's legal fees increased $130,327 from $155,189 in the three months ended March 31, 2016 compared to $285,516 in the period ended March 31, 2017. In the three months ended March 31, 2016 Napo incurred significant legal costs with regard to the negotiation of the Settlement, Termination, Asset Transfer and Transition Agreement with Salix which settled the litigation between the companies and returned the rights to crofelemer, including Mytesi® to Napo. Significant legal expense in the three months ended March 31, 2017 was associated with merger costs and with the administration of the intellectual property associated with crofelemer. Marketing and commercialization expenses were $0 in the three months ended March 31, 2016 compared with $282,762 in the three month period ended March 31, 2017 associated with efforts to promote and commercialize Mytesi®. Such costs are projected to increase significantly in 2017. An allocation of rent expense was charged to Napo by Jaguar in the three month period ended 2017 and is included in third party consulting and service fees. Such charges were relatively insignificant. Other expenses, including insurance costs and travel increased from the three month period ended March 31, 2016 as result of increased activity in the same period in 2017.

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Comparison of the years ended December 31, 2016 and 2015

The following table summarizes Napo's results of operations with respect to the items set forth in such table for the years ended December 31, 2016 and 2015, together with the change in such items in dollars and as a percentage:

	Years Ended December 31,		Variance	
	2016	2015	($)	(%)
Revenue	$ 987,312	$ 390,953	596,359	152.5%
Operating Expenses				
Cost of revenue	(726,506)	(174,949)	(551,557)	315.3%
Gross profit	260,806	216,004	44,802	20.7%
Research and development expense	127,137	1,672,472	(1,545,335)	(92.4)%
Selling, general and administrative	2,725,925	2,618,066	107,859	4.1%
Total operating expenses	2,853,062	4,290,538	(1,437,476)	(33.5)%
Loss from operations	(2,592,256)	(4,074,534)	1,482,278	36.4%
Interest expense, net	(15,609,092)	(8,048,674)	7,560,418	93.9%
Gain on disposition of related party		29,961,150	(29,961,150)	(100.0)%
Impairment	(574,059)	(9,751,974)	(9,177,915)	(94.1)%
Gain on litigation settlement	1,888,319		1,888,319	100%
Change in fair value of warrants		(267,867)	267,867	100.0%
Loss from equity method investment in related party	(3,505,940)	(2,915,090)	590,850	20.3%
Consolidated net income (loss)	(20,393,028)	4,903,011	(25,296,039)	(515.9)%
Net loss attributable to non-controlling interest		406,150	(406,150)	(100.0)%
Net income (loss) and comprehensive income (loss)	$ (20,393,028)	$ 5,309,161	(25,702,189)	(484.1)%

Revenue and Cost of Revenue

Revenue and related cost of revenue for the years ended December 31, 2016 reflects net sales of Mytesi® by Napo from June to December 31, 2016 Included in revenue is approximately $32,000 of royalty income from Salix's sales of Mytesi® in Q1 2016. Cost of revenue is comprised of the manufactured price of Mytesi®, plus the allocated costs of manufacturing and quality personnel as well as freight. Cost of revenue for Mytesi is higher as a percentage of net sales as a result of the initial costs of adding supply, quality and manufacturing personnel and establishing and implementing quality assurance and control procedures.

For the year ended December 31, 2015, revenue is primarily comprised of royalties received from Salix from its net sales of Mytesi® (formerly known as Fulyzaq) and approximately $77,000 of revenue from sales of Neonorm calf. Cost of revenue in the year ended December 31, 2015 relates to royalties payable to third parties on the net sales of Mytesi® by Salix and the inclusion of Jaguar cost of revenue for sales of Neonorm Calf.

Research and Development Expense

The following table presents the components of research and development expense for the years ended December 31, 2016 and 2015, together with the change in such components in dollars and as a percentage. Research and development expenses in 2015 include five months of Jaguar activity and

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accordingly 2016 is not comparable due to the limited amount of research and development activity conducted by Napo.

	Years Ended December 31,			
	2016	2015	Variance	Variance %
R&D:				
Personnel and related benefits	$ 127,137	$ 599,557	$ (472,420)	371.6%
Materials expense and tree planting		19,000	$ (19,000)	100.0%
Travel, other expenses		50,418	$ (50,418)	100.0%
Clinical and contract manufacturing		936,589	$ (936,589)	100.0%
Stock-based compensation		38,133	$ (38,133)	100.0%
Other		28,775	$ (28,775)	100.0%
Total	$ 127,137	$ 1,672,472	$ (1,545,335)	1,215.5%

Napo decreased research and development expense $1,545,335 from $1,672,472 in the year ended December 31, 2015 to $127,137 for the same period in 2016. Research and development expense in 2016 of $127,137 was related to personnel and third party consulting expense. The consolidation of Jaguar research and development expenses for the first five months of 2015 accounted for $1,617,857 of the $1,672,472 of research and development expense in 2015. Clinical trial and contract manufacturing expenses decreased $936,589 because Napo conducted no clinical trial activity in 2016 and all Napo manufacturing activity in 2016 was devoted to manufacturing inventory of Mytesi®.

Selling, General and Administrative Expense

The following table presents the components of general and administrative expense for the years ended December 31, 2016 and 2015 together with the change in such components in dollars and as a percentage:

	Years Ended December 31,			
	2016	2015	Variance	Variance %
G&A:				
Personnel and related benefits	$ 311,303	$ 853,488	(542,185)	63.5%
Accounting fees	53,413	229,195	(175,782)	76.7%
Third-party consulting fees and Jaguar service fees	732,875	101,609	631,266	621.3%
Legal fees	547,562	797,584	(250,022)	31.3%
Travel	117,345	178,655	(61,310)	34.3%
Stock-based compensation		31,011	(31,011)	100.0%
Rent and lease expense		70,770	(70,770)	100.0%
Marketing, commercialization	730,252	41,706	688,546	1651.0%
Other	233,175	314,048	(80,873)	25.8%
Total	$ 2,725,925	$ 2,618,066	$ 107,859	4.1%

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Napo's selling, general and administrative expenses increased $107,859 from $2,618,066 in the year ended December 31, 2015 to $2,725,925 for the same period in 2016. The consolidation of Jaguar results for five months in 2015 accounted for $1,766,388 of the $2,618,066 of general and administrative expense in 2015. Napo's third-party consulting fees and service fees increased $631,266 from $101,609 in the year ended December 31, 2015 compared to $732,875 in the same period in 2016. In 2016, Napo entered into an Employee Lease and Overhead Allocation Agreement whereby Napo was billed $628,867 for the services of Jaguar employees in the areas of quality, manufacturing, supply and other general and administrative areas in 2016. Napo also incurred fees for regulatory consultants in 2016 which is included in third party consulting fees. Napo had one employee in 2016. Stock-based compensation decreased from $31,011, attributable to the consolidation of Jaguar, in the year ended December 31, 2015 to $0 in the same period in 2016 as Napo had no stock based compensation expense in 2016. Napo's legal fees decreased $250,022 from $797,584 in the year ended December 31, 2015 compared to $547,562 in the same period in 2016. In 2016 Napo incurred significant legal costs with regard to the negotiation of the Settlement, Termination, Asset Transfer and Transition Agreement with Salix which settled the litigation between the companies and returned the rights to crofelemer, including Mytesi® to Napo. Other significant legal expense was associated with the return and administration of the intellectual property associated with crofelemer. Napo also incurred significant marketing and commercialization expenses of $730,252 in 2016 associated with efforts to promote and sell Mytesi®. Such costs are projected to increase significantly in 2017. An allocation of rent expense was charged to Napo by Jaguar in 2016 and is included in third party consulting and service fees. Such charges were relatively insignificant. Other expenses, including insurance costs decreased from 2015 as a result of the deconsolidation of Jaguar after May 2015 and Napo's relatively lower level of operations in 2016.

Liquidity and Capital Resources

Sources of Liquidity

Since inception, Napo has incurred net losses and negative cash flows from operations, and, as of March 31, 2017 and December 31, 2016, Napo had an accumulated deficit of $160,366,250 and $157,438,301, respectively. Substantially all of Napo's historical net losses resulted from costs incurred in connection with its research and development programs, stock-based compensation, interest expense and from general and administrative costs associated with its operations through March 31, 2017.

As of March 31, 2017 and December 31, 2016, Napo had cash, cash equivalents, and short-term investments of $1,414,678 and $2,271,745, respectively. A substantial portion of Napo's cash at March 31, 2017 was the result of the issuance of $3.16 million of convertible notes in December 2016 and in March 2017. In the near term, Napo does not expect to incur significant expenditures planned for manufacturing equipment. However, without completion of the merger and the concurrent consummation of the debt settlements and new financing described herein, Napo does not believe its current capital resources are sufficient to fund its planned operations for the next 12-months. Napo's independent registered public accounting firm has included an explanatory paragraph in its audit report included with Napo's audited financial statements for the years ended December 31, 2016 and 2015 attached hereto regarding Napo's assessment of substantial doubt about its ability to continue as a going concern. Napo's financial statements do not include any adjustments that may result from the outcome of this uncertainty.

Napo will continue to require substantial additional capital to continue its clinical development activities. The amount and timing of Napo's future funding requirements will depend on many factors, including its ability to attract development and licensing partners and the pace and results of its clinical development efforts. Failure to raise capital as and when needed, on favorable terms or at all, would have a negative impact on Napo's financial condition and its ability to develop its product candidates.

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The following table shows a summary of cash flows for the three months ended March 31, 2017 and, 2016:

	Three Months Ended March 31,	
	2017	2016
Total cash used in operations	$ (1,357,067)	$ 390,646
Total cash from investing activities		
Total cash provided by/(used in) financing activities, net	500,000	(685,508)
	$ (857,067)	$ (294,862)

The following table shows a summary of cash flows for the years ended December 31, 2016 and, 2015:

	Years Ended December 31,	
	2016	2015
Total (cash used in)/provided by operations	$ (474,192)	$ 960,119
Total cash provided by/(used in) investing activities		
Total cash provided by/(used in) financing activities, net	1,919,790	(1,066,716)
	$ 1,445,598	$ (106,597)

Cash Used in Operating Activities

During the three months ended March 31, 2017, cash used in operating activities of $1,357,067 resulted from Napo's net loss of $2,927,949, offset by amortization of debt discount of $65,706, non-cash accretion of interest on the Financing Agreement of $2,341,281; the equity method gain on Napo's investment in Jaguar of $746,667, and net changes in operating assets and liabilities of $(89,438).

During the three months ended March 31, 2016, cash provided by operating activities of $390,646 resulted from Napo's net loss of $2,460,096, offset by a non-cash gain on the settlement of litigation with Salix of $674,578; the equity method loss on Napo's investment in Jaguar of $1,134,233; non-cash interest of $1,663,835 on the Financing Agreement; and, changes in operating assets and liabilities of $727,252.

During the year ended December 31, 2016, cash used in operating activities of $(474,192) resulted from Napo's net loss of $20,393,028, offset by non-cash accretion of interest and penalties on the Financing Agreement of $14,590,719; the equity method loss and impairment on Napo's investment in Jaguar of $4,079,999, the receipt of license fees from Jaguar of $425,000, a gain of $1,888,319 on the settlement with Salix and other changes in operating assets and liabilities of $2,711,437.

During the year ended December 31, 2015, cash provided by operating activities of $960,119 resulted from Napo's net income of $5,309,161, offset by a non-cash gain on the Jaguar investment of $29,961,150, the deconsolidation of Jaguar of $7,272,553 offset by a gain attributable to the non-controlling interest in Jaguar of $406,150; the equity method loss and impairment on Napo's investment in Jaguar of $12,667,064; non-cash interest of $5,997,784 on the Financing Agreement; the receipt of $1,225,000 of license fees from Jaguar; and, other changes in operating assets and liabilities of $1,144,143.

Cash Provided By/Used In Investing Activities

During the three months ended March 31, 2017, cash from investing activities was $0.

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During the three months ended March 31, 2016, cash from investing activities was $0.

During the year ended December 31, 2016, cash provided by investing activities was $0.

During the year ended December 31, 2015, cash used in investing activities was $0.

Cash Provided by Financing Activities

During the three months ended March 31, 2017, cash provided by financing activities of $500,000, net of unamortized issuance costs.

During the three months ended March 31, 2016, cash used by financing activities of $685,508 primarily consisted of payments made of $462,500 on Napo's convertible notes due June 30, 2015 and $223,008 of payments made on the Financing Agreement.

During the year ended December 31, 2016, cash provided by financing activities of $1,919,790 consisted of long term convertible debt of $2,500,000, offset by debt discount and issuance costs of $580,210.

During the year ended December 31, 2015, cash used by financing activities of $1,066,716 primarily consisted of payments made of $250,000 on Napo's convertible notes due June 30, 2015 and payments of $816,716 made by Jaguar.

Description of Indebtedness

Financing Agreement

In December 2011 and April 2013, Napo entered into a Forward Purchase Agreement(s) (together, the "Agreements") with a third party (the "Purchaser") to provide funding for Napo's litigation activities with Salix and its arbitration with Glenmark Pharmaceuticals Limited. The terms of the Agreements included a return on funds advanced, depending upon the amount of time lapsed from the initial funding, in the event Napo was successful in any part of its litigation or arbitration. In October 2014, after a successful outcome in the litigation, Napo and the Purchaser restructured what had become the existing debt under Agreements into a note (the "Financing Agreement") with a principal amount of $30,000,000 due January 1, 2017, and Napo recognized a gain on the restructuring of the debt. The loan under the Financing Agreement accrues interest monthly at 18% per annum, with monthly accrued interest added to principal on the first day of the following month.

From July 2014 to March 2016, a portion of the royalties received by Napo from the Salix Collaboration Agreement was paid into a control account for the benefit of the Purchaser and such funds reduced the outstanding balance on the Financing Agreement. In March 2016, subsequent to the settlement of the litigation with Salix and the return of the licensed assets to Napo, the Purchaser and Napo entered into an amendment to the Financing Agreement which provided for payments by Napo to the Purchaser of 10% of net sales of Mytesi® on a quarterly basis.

The Purchaser has a security interest (the "Security Interest") on all Napo assets, including 2,666,666 shares of Jaguar owned by Napo. The Financing Agreement requires that any funds Napo receives from sales of assets, recoveries, etc. be used to pay interest or principal on the Financing Agreement.

All principal and interest on the Financing Agreement was due on January 1, 2017. The outstanding balance owed was $53,597,920, $51,256,639 and $36,203,421 as of March 31, 2017, and December 31, 2016 and 2015, respectively, inclusive of accrued interest added to principal of $23,392,283, $20,588,503 and $5,997,784 at March 31, 2017, December 31, 2016 and December 31, 2015, respectively. The amounts owed under the Financing Agreement will be settled at the closing of the merger pursuant to the Nantucket Settlement Agreement. See " Recent Events Refinancing",

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"Certain Relationships and Related Transactions of Jaguar Financings Nantucket Settlement Agreement" and "The Merger Agreement and Related Agreements Settlement Agreements and Investor Rights Agreement".

Convertible Notes Due June 30, 2015

In March 2011 Napo entered into three convertible notes (the "Convertible Notes") equaling $1,575,000 with an original due date of March 18, 2014 with interest on the outstanding principal amount bearing interest at 20%. The Convertible Notes and underlying principal, interest rates, maturity dates, payment terms, and collateral were amended at various times through January 2016. The first amendment provided that the lenders (the "Lenders") were to receive 100% of the payments made to Napo pursuant to the License Agreement with Jaguar Animal Health, Inc., after the first $250,000 payment to Napo. The first payment of $250,000 was made in 2015. The amended maturity date of the Convertible Notes was June 30, 2015.

In October 2015, the Lenders and Napo entered into a further amendment of the Convertible Notes. As part of the amendment, the Lenders agreed to reduce the level of payments made by Napo to 50% of the payments received by Napo from Jaguar Animal Health, Inc. under the License Agreement. The interest on the Convertible Notes was then increased from 12% to 15%, as of April 1, 2015 because Napo had made no interest payments as required beginning on April 1, 2015. All other terms remained the same.

In January 2016, effective as of December 31, 2015, the Lenders and Napo agreed to a reduction of $100,000 in the payment due to the Lenders as of December 31, 2015 from Napo's License Agreement with Jaguar Animal Health, Inc. and that $100,000 would be added to the next payment to be made by Napo to the Lenders on March 31, 2016 when Napo received its final payment under the License Agreement.

In connection with the amendments made to the Convertible Notes, Napo has issued warrants to the lenders at various times. As of March 31, 2017, December 31, 2016 and 2015, the Convertible Note Lenders collectively hold warrants to purchase 1,916,137 shares of common stock.

The Convertible Notes have certain covenants prohibiting investments in new subsidiaries and, restrict the issuance of stock compensation to Napo employees, consultants or others without the express written consent of Dorsar Investment Company, one of the Lenders and restrict Napo from incurring any debt with superior rights than those of the Lenders, without their consent. The Convertible Notes have a second lien on Napo assets and a pledge of common stock owned by Lisa A. Conte. Napo cannot distribute to its shareholders any shares Napo owns of Jaguar Animal Health, Inc. The principal balance owed was $1,321,151, $1,321,151, and $1,783,650 as of March 31, 2017, and December 31, 2016 and 2015 respectively. The interest due on the principal balance was $670,415, $653,683 and $442,935 as of March 31, 2017, and December 31, 2016 and 2015, respectively.

Convertible Notes Due December 2019

In December 2016, Napo entered into a note purchase agreement which provides for the sale of up to $12,500,000 face amount of notes and issued convertible promissory note(s) (the December Notes) in the aggregate face amount of $2,500,000 to three lenders and received proceeds of $2,000,000 which resulted in $500,000 of original issue discount. The carrying amount of the December Notes is reduced by $80,210 on the balance sheet for debt issuance costs. Any subsequent note purchases will be at the sole discretion of the purchaser and will be issued at similar original issue discount as the December Notes.

The December Notes mature on December 30, 2019 and bear interest at 10% with interest due each six-month period after December 30, 2016. Interest on these notes was immaterial for the year

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ended December 31, 2016. If Napo merges with Jaguar, at the option of Napo, interest may be paid in cash or in the stock of Jaguar, but if Jaguar is not listed on Nasdaq or the OTC bulletin board, then interest must be paid in cash. If Napo merges with Jaguar, then in each one year period beginning December 30, 2016, up to one-third of the principal and accrued interest on the December Notes may be converted into the common stock of the merged entity at a conversion price of $0.935 per share. The December Notes are secured by a security interest in Napo inventory pursuant to a limited subordination agreement between Napo, the December Note purchasers and the Convertible Note Lenders and the Lender associated with the Financing Agreement. The principal balance owed was $2,500,000, $2,500,000 and $0 as of March 31, 2017 and December 31, 2016 and 2015, respectively. The interest due on the principal balance was $63,010, $1,366 and $0 as of March 31, 2017 and December 31, 2016 and 2015, respectively.

March 2017 Notes

On March 1, 2017, Napo entered into an exchangeable note purchase agreement with two lenders for the funding of $1,050,000 (face amount of $1,312,500) in two $525,000 tranches (face amount $656,250). The notes bear interest at 3% and mature on December 1, 2017. Interest may be paid at maturity in either cash or shares of Jaguar, provided that if Jaguar is not listed on Nasdaq or the Bulletin Board or registered under the Securities Act then interest must be paid in cash. Assuming the issuance of $1,312,500 of exchangeable notes, the notes may be exchanged for up to 2,343,752 shares of Jaguar common stock, prior to maturity date assuming that either the merger of Napo and Jaguar has occurred, among other conditions. Napo received funding of $525,000 on March 1, 2017, and recorded $131,250 of original issue discount and $25,000 of debt issuance costs. The principal amount outstanding as of March 31, 2017 was $656,250 with unpaid interest of $1,672.

Financing Agreement Settlement

On March 31, 2017, Napo entered into the Nantucket Settlement Agreement pursuant to which Napo agreed, simultaneously with the consummation of the merger, (a) to make a cash payment to Nantucket of either $8 million or $8.5 million (depending upon the percentage of outstanding common stock represented by the shares released in the following clause (b)), which will reduce the outstanding principal obligations under the Financing Agreement, and (b) in satisfaction as a compromise for the outstanding obligations under the Financing Agreement and the release of any lien or security interest in respect of such outstanding obligations, (x) to transfer to Nantucket 2,666,666 shares of Jaguar common stock owned by Napo and (y) to cause Jaguar to issue to Nantucket 2,217,579 newly issued shares of Jaguar voting common stock (sometimes referred to herein as the Remaining Tranche C Shares) and 38,180,451 newly issued shares of Jaguar non-voting common stock, which shares are subject to the terms of the Investor Rights Agreement described below.

In connection with the execution of the merger agreement and the Nantucket Settlement Agreement, Jaguar and Nantucket entered into the Investor Rights Agreement, pursuant to which, among other things, Jaguar agreed to register the resale of the shares issued to Nantucket pursuant to the Nantucket Settlement Agreement on one or more registration statements. A portion of these shares will be held in escrow and released to either Nantucket or the former Napo stockholders, depending on whether Nantucket receives sufficient proceeds from the resale of the Tranche A Shares to third parties to satisfy the Hurdle Amounts. The Investor Rights Agreement also provides that Jaguar cannot pay any dividends on any shares of its capital stock or redeem any shares, except in limited circumstances, without the prior written consent of Nantucket.

On June 27, 2017, Jaguar, Napo and Nantucket entered into the Consent, which, among other things, as a result of certain dilution that might be caused by the issuance of a convertible note as described in the exhibit to the Consent and certain stock issuances by Jaguar since entering into the merger agreement and prior to the consummation of the merger, (x) increases the Remaining

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Tranche C Shares from 1,940,382 shares of Jaguar voting common stock to 2,217,579 shares of Jaguar voting common stock and (y) reduces the number of Tranche B Shares from 19,900,202 shares of non-voting Jaguar common stock to 19,700,625 shares of non-voting Jaguar common stock. To the extent dilution to the Tranche A Shares as a result of such convertible note issuance or such stock issuances would result in a breach of the Investor Rights Agreement or a failure of the condition set forth in Section 2(j) of the Nantucket Settlement Agreement to be satisfied at the closing of the merger, any such breach or failure was waived by Nantucket so long as immediately after the closing of the merger, the Tranche A Shares represent no less than 18.9% of the total outstanding capital stock of Jaguar (on a fully diluted basis as defined in Section 2.1(d) of the Investor Rights Agreement as modified by the Consent).

Under the Consent, the parties also (x) agreed to increase the authorized number of shares of voting common stock under Jaguar's Third Amended and Restated Certificate of Incorporation from 175,000,000 shares to 250,000,000 shares and (y) acknowledged and agreed that the Outside Date specified in Section 10.1(b)(i) of the merger agreement be extended to July 31, 2017 and the date specified in Section 9(a) of the Nantucket Settlement Agreement be extended to July 31, 2017.

Settlement with the Convertible Notes

On March 31, 2017, Napo entered into an agreement with the three Convertible Note lenders to exchange their existing $1,991,565 debt including interest accrued up to January 31, 2017 for 2,153,041 non-voting common shares of Jaguar at a deemed value of $0.925 per share. Additionally, upon the closing of the merger, all warrants to purchase 6,727,443 shares Napo common stock currently held by the lenders or entities and/or individuals affiliated with the lenders with be exchanged for warrants to purchase 1,224,874 shares of Jaguar common stock at an exercise price of $0.08 per share. The settlement, among other conditions, is predicated on the successful closing of the merger of Napo and Jaguar.

Settlement with Legal Creditors

On March 31, 2017, Napo entered into agreements with two law firms to settle $2,376,812 owed to them in exchange for the issuance of 2,569,526 non-voting shares of Jaguar common stock at a deemed value of $0.925 per share. The settlement, among other conditions, is predicated on the successful closing of the merger of Napo and Jaguar.

Amendment to Kingdon Capital Management Note Purchase Agreements

On March 31, 2017, Napo and entities affiliated with Kingdon Capital Management entered into an Amended Note Purchase Agreement which among other items provided for the payment of additional legal fees to Kingdon through the issuance of 54,054 shares of Jaguar common stock assuming a closing of the merger.

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The following is a schedule of Napo's debt:

Debt	Borrowings March 31, 2017	Borrowings December 31, 2016	Borrowings December 31, 2015
Current:			
Financing Agreement	$ 53,597,920	$ 51,256,639	$
Convertible Notes due June 30, 2015	1,838,498	1,321,151	1,783,650
Total current borrowings:	55,436,418	52,577,790	1,783,650
Long term debt:			
Financing Agreement			36,203,421
Settlement Liability(1)	2,500,000	2,500,000	2,500,000
Convertible Notes, net, due December 30, 2019	1,968,149	1,919,790	
Total long term borrowings:	4,468,149	4,419,790	38,703,421
Total:	$ 59,904,567	$ 56,997,580	$ 40,487,071

The following table sets forth scheduled future principal payments as of March 31, 2017:

Amounts Due in Years Ending December 31,	Principal Amount
2017	$ 55,436,418
2018	
2019	2,500,000
Thereafter(1)	2,500,000
Total:	$ 60,436,418

(1) Settlement liability is payable out of royalties to be paid pursuant to a collaboration agreement with Glenmark Pharmaceuticals Limited. See Note 5 and Note 12 to the financial statements. Napo has received no royalties from the its collaboration agreement with Glenmark and is unable to determine when, if ever, such royalties will be received. Future principal payments after 2019 include unamortized debt discount of $531,851.

Warrants

Napo's issuance of warrants to purchase Napo common stock as of March 31, 2017, is summarized in the table below. All outstanding warrants to purchase common stock have been issued in connection with various debt and equity financings between 2008 and 2014, including amendments and refinancings, to entities including Dorsar Partners, LP, Dorsar Investment Company, Continental Properties, Alco Investment Company, Two Daughters LLC and/or entities affiliated with the principals thereof.

Shares underlying warrants	Exercise price	Expiration Date
411,047	$ 0.200000	December 31, 2018
387,849	$ 0.550000	December 31, 2018
3,361,080	$ 0.194163	December 31, 2025
688,953	$ 0.200000	December 31, 2025
1,155,560	$ 0.550000	December 31, 2025

722,954	$	0.553280	December 31, 2025
6,727,443			

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Indian Subsidiaries

Napo has three subsidiary companies (the "Subsidiary Companies") in India. These entities have had limited operations for several years, however certain of them have deficit balances. In connection with funding arrangements entered into by an investor in the Subsidiary Companies, the investor may require the Subsidiary Companies to redeem certain assets and distribute the proceeds to the investor. Napo believes that assets subject to redemption have little or no value, however the investor may require redemption for certain administrative or legal purposes. Under Indian law an entity may not make distributions to investors if they are in a net deficit position. While the estimated fair value of the redeemable assets is immaterial, Napo may have to contribute additional funds to the Subsidiary Companies to remove any net deficit in order for the redemption to proceed. Napo estimates that amount of such contribution, if any, to the Subsidiary Companies would be $250,000 or less.

On March 16, 2017, Napo received a communication from the investor in the Subsidiary Companies that it intended to exercise it redemption right.

Income Taxes

A valuation allowance is provided when it is more likely than not that the deferred tax assets will not be realized. Napo has established a valuation allowance to offset net deferred tax assets as of December 31, 2016 and 2015, due to the uncertainty of realizing future tax benefits from its net operating loss carryforwards and other deferred tax assets. As of December 31, 2016, Napo had federal and California net operating loss carryovers of approximately $85.4 million and $83.1 million, respectively. The federal and California net operating losses will begin to expire in 2033.

As of December 31, 2016, Napo had federal and California research credit carryovers of approximately $1.3 million and $0.8 million, respectively. The federal research credits will begin to expire in 2033. The California research credits carry forward indefinitely.

The Tax Reform Act of 1986 limits the use of net operating loss and tax credit carryforward in certain situations where changes occur in the stock ownership of a company. Due to Napo's cumulative loss position, Napo has not determined whether an ownership change has occurred under these provisions. In the event Napo has had a change in ownership, as defined by the tax law, utilization of the carryforwards could be limited.

Critical Accounting Policies and Significant Judgments and Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles, or U.S. GAAP, requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses, and related disclosures in the financial statements. Critical accounting policies are those accounting policies that may be material due to the levels of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change, and that have a material impact on financial condition or operating performance. While Napo bases its estimates and judgments on its experience and on various other factors that Napo believes to be reasonable under the circumstances, actual results may differ from these estimates under different assumptions or conditions. Napo believes the following significant accounting policies used in the preparation of its financial statements require significant judgments and estimates. For additional information relating to these and other accounting policies, see Note 2 to Napo's audited financial statements, appearing elsewhere in this joint proxy statement/prospectus.

Recent Accounting Pronouncements

In August 2016, the FASB issued Accounting Standards Update No. 2016-15, *Statement of Cash Flows* (Topic 230) ("ASU No. 2016-15"). ASU No. 2016-15 addresses how certain cash receipts and cash

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payments are presented and classified in the statement of cash flows. ASU No. 2016-15 is effective for the Company in the first quarter of 2018, with early adoption permitted, and is to be applied using a retrospective approach. The Company is expected to adopt the provisions of ASU 2016-15 on January 1, 2017, and the provisions are not expected to have a material impact on the Company's financial position or results of operations.

In June 2016, the FASB issued Accounting Standards Update No. 2016-13, *Financial Instruments Credit Losses* (Topic 326) ("ASU No. 2016-13"). ASU No. 2016-13 revises the methodology for measuring credit losses on financial instruments and the timing of when such losses are recorded. ASU No. 2016-13 is effective for the Company in the first quarter of 2020, with early adoption permitted, and is to be applied using a modified retrospective approach. The Company is currently evaluating the potential effects of adopting the provisions of ASU No. 2016-13.

In March 2016, the FASB issued Accounting Standards Update No. 2016-06, *Derivatives and Hedging Contingent Put and Call Options in Debt Instruments* (Topic 815) ("ASU No. 2016-06"). ASU No. 2016-06 clarifies the steps required to assess whether a call or put option meets the criteria for bifurcation as an embedded derivative. Effective April 3, 2016, the Company adopted the provisions of ASU No. 2016-06 on a prospective basis. The adoption of the provisions of ASU No. 2016-06 did not materially impact the Company's consolidated financial position or results of operations.

In January 2016, the FASB issued Accounting Standards Update No. 2016-01, *Financial Instruments Recognition and Measurement of Financial Assets and Financial Liabilities* (Topic 825) ("ASU No. 2016-01"). ASU No. 2016-01 revises the classification and measurement of investments in certain equity investments and the presentation of certain fair value changes for certain financial liabilities measured at fair value. ASU No. 2016-01 requires the change in fair value of many equity investments to be recognized in net income. ASU No. 2016-01 is effective for the Company in the first quarter of 2018, with early adoption permitted, and is to be applied prospectively. The Company is currently evaluating the potential effects of adopting the provisions of ASU No. 2016-01.

In November 2015, the FASB issued Accounting Standards Update No. 2015-17, *Income Taxes Balance Sheet Classification of Deferred Taxes* (Topic 740) ("ASU No. 2015-17"). ASU No. 2015-17 requires deferred tax liabilities and assets to be classified as noncurrent in the consolidated balance sheet. ASU No. 2015-17 is effective for the Company in the first quarter of 2017, with early adoption permitted. ASU No. 2015-17 may be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. Effective October 2, 2016, the Company adopted the provisions of ASU No. 2015-17 on a prospective basis. The adoption of the provisions of ASU No. 2015-17 resulted in a reclassification of deferred tax liabilities and assets from current to noncurrent and did not materially impact the Company's consolidated financial position or results of operations.

In July 2015, the FASB issued Accounting Standards Update No. 2015-11, *Inventory Simplifying the Measurement of Inventory* (Topic 330) ("ASU No. 2015-11"). ASU No. 2015-11 requires an entity to measure inventory within the scope of the update at the lower of cost and net realizable value, and defines net realizable value as the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. Effective January 1, 2016, the Company adopted the provisions of ASU No. 2015-11 on a prospective basis. The adoption of the provisions of ASU No. 2015-11 did not materially impact the Company's consolidated financial position or results of operations.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (Topic 606) ("ASU No. 2014-09"). ASU No. 2014-09 supersedes all existing revenue recognition guidance. Under ASU No. 2014-09, an entity should recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU No. 2014-09 is effective for

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the Company in the first quarter of 2018, with early adoption permitted in the first quarter of 2017. ASU No. 2014-09 allows for either full retrospective or modified retrospective adoption. In March, April, May, and December 2016, the FASB issued ASU No. 2016-08, *Revenue from Contracts with Customers: Principal versus Agent Considerations (Reporting Revenue Gross versus Net)* ("ASU No. 2016-08"); ASU No. 2016-10, *Revenue from Contracts with Customers: Identifying Performance Obligations and Licensing* ("ASU No. 2016-10"); ASU No. 2016-12, *Revenue from Contracts with Customers: Narrow-Scope Improvements and Practical Expedients* ("ASU No. 2016-12"); and ASU No. 2016-19, *Technical Corrections and Improvements* ("ASU No. 2016-19"), respectively. ASU No. 2016-08, ASU No. 2016-10, ASU No. 2016-12, and ASU No. 2016-19 provide supplemental adoption guidance and clarification to ASU No. 2014-09, and must be adopted concurrently with the adoption of ASU No. 2014-09. The Company is currently evaluating the potential effects of adopting the provisions of ASU No. 2014-09, ASU No. 2016-08, ASU No. 2016-10, ASU No. 2016-12, and ASU No. 2016-19.

Market Prices of and Dividends on Napo Common Stock

There is no established trading market for the Napo common stock. As of June 26, 2017, Napo common stock was held by approximately 275 stockholders of record. No cash dividends have been paid on Napo common stock during the two most recent fiscal years, and Napo does not intend to pay cash dividends on its common stock in the immediate future.

Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table sets forth information with respect to the beneficial ownership of Napo's voting securities as of June 26, 2017, the date of the table, by:

- each person known by Napo to beneficially own more than 5% of the outstanding shares of its common stock;
- each of Napo's named executive officers;
- each of Napo's directors; and
- all of Napo's directors and executive officers as a group.

Information with respect to beneficial ownership has been furnished by each director, executive officer or beneficial owner of more than 5% of Napo's common stock. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting and investment power with respect to the securities. Except as otherwise provided by footnote, and subject to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of Napo common stock shown as beneficially owned by them. The number of shares of Napo common stock used to calculate the percentage ownership of each listed person includes the shares of Napo common stock underlying options or warrants held by such persons that are currently exercisable or exercisable within 60 days of June 26, 2017, but are not treated as outstanding for the purpose of computing the percentage ownership of any other person.

Percentage of beneficial ownership is based on 108,202,786 shares of Napo common stock outstanding as of June 26, 2017.

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Except as otherwise set forth below, the address of each beneficial owner listed in the table below is c/o Napo Pharmaceuticals, Inc., 201 Mission Street, Suite 2375, San Francisco, California 94105.

Name and Address of Beneficial Owner	Title of Class	Amount and Nature of Beneficial Ownership	Percent of Class
5% Stockholders:			
The Bank of New York (Nominees) Limited(1)	Common	38,878,169	35.9%
Bochnowski Family Trust(2)	Common	7,007,020	6.5%
WBW Trust Number One(3)	Common	6,006,175	5.6%
ILFS Holdings(4)	Common	5,600,455	5.2%
Named executive officers and directors:			
Lisa A. Conte(5)	Common	1,394,380	1.3%
Richard W. Fields	Common		
Joshua Mailman(6)	Common	5,135,674	4.7%
Gregory Stock(7)	Common	686,273	0.6%
Charles Thompson(8)	Common	137,000	0.1%
All current executive officers and directors as a group (5 persons)(9)	Common	7,353,327	6.7%

(1) Represents 38,878,169 shares held by entities advised by Invesco Asset Management Limited, a wholly owned subsidiary of Invesco UK Limited and Invesco Limited, a Bermudan company listed on the NYSE.

(2) James J. Bochnowski, the chairman of Jaguar's board, is a co-trustee and beneficiary of Bochnowski Family Trust and shares voting and investment control over such shares with his spouse.

(3) WBW Trust Number One is a Washington state trust, for which William T. Weyerhaeuser is the trustee with sole voting and investment power.

(4) Represents 5,600,455 shares held by ILFS Holdings.

(5) Includes (i) 673,380 shares of common stock and (ii) 757,000 shares of common stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017. Lisa A. Conte, Napo's interim Chief Executive Officer, is the chief executive officer and president of Jaguar.

(6) Includes (i) 4,899,321 shares of common stock directly held by Mr. Mailman and (ii) 236,363 shares of common stock held by the Joshua Mailman Foundation. The Joshua Mailman Foundation is an independent foundation founded by Mr. Mailman and he is the President and one of two directors of the foundation. The Joshua Mailman Foundation's principal business address is Hecht and Co., 350 Fifth Ave., 68th Floor, New York, NY 10118.

(7) Includes (i) 386,273 shares of common stock and (ii) 300,000 shares of common stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017.

(8) Represents 137,000 shares of common stock issuable under stock options that are exercisable or will become exercisable within 60 days of June 26, 2017.

(9) See footnotes (5) - (8).

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MANAGEMENT OF THE COMBINED COMPANY AFTER THE MERGER

Executive Officers and Directors

Termination of Current Executive Officers of Napo

The employment of the current executive officers of Napo is expected to be terminated immediately prior to the completion of the merger.

Executive Officers and Directors of the Combined Company Following the Merger

Following the merger, the combined company's directors will consist of the seven (7) members of Jaguar's current board of directors, James J. Bochnowski, Lisa A. Conte, Folkert W. Kamphuis, Jiahao Qiu, Zhi Yang, Ph.D, John Micek III and Ari Azhir, Ph.D., who are divided into three classes with staggered three-year terms.

The following table lists the names and ages as of April 1, 2017 and positions of the individuals who are expected to serve as executive officers and directors of the combined company upon completion of the merger:

Name	Age	Position
Executive Officers		
Lisa A. Conte	58	Chief Executive Officer, President and Director
Steven R. King, Ph.D.	59	Executive Vice President, Sustainable Supply, Ethnobotanical Research and Intellectual Property and Secretary
Karen S. Wright	61	Chief Financial Officer and Treasurer
Non-Employee Directors		
James J. Bochnowski(1)(2)(3)	73	Chairman of the Board of Directors
Lisa A. Conte	58	Chief Executive Officer, President and Director
Jiahao Qiu(1)	31	Director
Zhi Yang, Ph.D.(1)	61	Director
Folkert W. Kamphuis(2)(3)	57	Director
John Micek III(1)(2)(3)	64	Director
Ari Azhir, Ph.D.(1)(2)	69	Director

(1) Member of the Audit Committee.

(2) Member of the Compensation Committee.

(3) Member of the Nominating Committee.

Executive Officers

Lisa A. Conte. Ms. Conte has served as Jaguar's President, Chief Executive Officer and a member of Jaguar's board of directors since she founded the company in June 2013. From 2001 to 2014, Ms. Conte served as the Chief Executive Officer of Napo Pharmaceuticals, Inc., a biopharmaceutical company she founded in November 2001. In 1989, Ms. Conte founded Shaman Pharmaceuticals, Inc., a natural product pharmaceutical company. Additionally, Ms. Conte is Napo's current Interim Chief Executive Officer and has served as a member of its board of directors since 2001. Ms. Conte is also currently a member of the board of directors of Healing Forest Conservatory, a California not-for-profit public benefit corporation, and the Board of Visitors of the John Sloan Dickey Center for International Understanding, Dartmouth College. Ms. Conte holds an M.S. in Physiology and Pharmacology from the University of California, San Diego, and an M.B.A. and A.B. in Biochemistry from Dartmouth College.

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Jaguar believes Ms. Conte is qualified to serve on Jaguar's board of directors due to her extensive knowledge of Jaguar and experience with Jaguar's product and product candidates, as well as her experience managing and raising capital for public and private companies.

Steven R. King, Ph.D. Dr. King has served as Jaguar's Executive Vice President of Sustainable Supply, Ethnobotanical Research and Intellectual Property since March 2014 and as Jaguar's Secretary since September 2014. From 2002 to 2014, Dr. King served as the Senior Vice President of Sustainable Supply, Ethnobotanical Research and Intellectual Property at Napo Pharmaceuticals, Inc. Prior to that, Dr. King served as the Vice President of Ethnobotany and Conservation at Shaman Pharmaceuticals, Inc. Dr. King has been recognized by the International Natural Products and Conservation Community for the creation and dissemination of research on the long-term sustainable harvest and management of *Croton lechleri*, the widespread source of crofelemer. Dr. King is currently a member of the board of directors of Healing Forest Conservatory, a California not-for-profit public benefit corporation. Dr. King holds a Ph.D. in Biology from the Institute of Economic Botany of the New York Botanical Garden and an M.S. in Biology from the City University of New York.

Karen S. Wright. Ms. Wright has served as Jaguar's Chief Financial Officer since December 15, 2015. Prior to joining Jaguar, Ms. Wright served as head of finance for Clene Nanomedicine, Inc., beginning in August 2014. From June 2011 to May 2014, Ms. Wright served as vice president of finance and corporate controller at Veracyte, Inc., and from 2006 to 2011, she served as vice president of finance, corporate controller and principal accounting officer of VIA Pharmaceuticals, Inc. Ms. Wright holds a BS in Accounting and Marketing from the University of California Walter A. Haas School of Business.

Officers serve at the discretion of the Jaguar Board. There is no family relationship between any of the executive officers or between any of the executive officers and Jaguar's directors. There is no arrangement or understanding between any executive officer and any other person pursuant to which the executive officer was selected.

Non-Employee Directors

James J. Bochnowski. Mr. Bochnowski has served as a member of Jaguar's board of directors since February 2014 and as Chairperson of Jaguar's board since June 2014. Since 1988, Mr. Bochnowski has served as the founder and Managing Member of Delphi Ventures, a venture capital firm. In 1980, Mr. Bochnowski co-founded Technology Venture Investors. Mr. Bochnowski holds an M.B.A. from Harvard University Graduate School of Business and a B.S. in Aeronautics and Astronautics from Massachusetts Institute of Technology.

Jaguar believes Mr. Bochnowski is qualified to serve on Jaguar's board of directors due to his significant experience with venture capital backed healthcare companies and experience as both an executive officer and member of the board of directors of numerous companies.

Jiahao Qiu. Mr. Qiu has served as a member of Jaguar's board of directors since February 2014. Mr. Qiu has been employed at BioVeda Management, Ltd., a life science investment firm, as associate (2010-2012), senior associate (2012-2014) and Principal since April 2014. From 2009 to 2010, he served as an interpreter for the Delegation of the European Union to China. Mr. Qiu holds a B.S. in Biotechnology from the Jiao Tong University in Shanghai, China.

Jaguar believes Mr. Qiu is qualified to serve on Jaguar's board of directors due to his experience with evaluating, managing and investing in life science portfolio companies for BioVeda Management, Ltd.

Zhi Yang, Ph.D. Dr. Yang has served as a member of Jaguar's board of directors since February 2014. Since 2005, Dr. Yang has served as the Chairperson, Managing Partner and Founder of BioVeda

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Management, Ltd., a life science investment firm. Dr. Yang is currently an advisor to the China Health and Medical Development Foundation, under China's Ministry of Health. Dr. Yang holds a Ph.D. in Molecular Biology and Biochemistry, as well as an M.A. in Cellular and Developmental Biology, both from Harvard University.

Folkert W. Kamphuis Mr. Kamphuis has served as a member of Jaguar's board of directors since June 2015. Mr. Kamphuis currently has his own consulting business. He most recently served as a member of the Executive Committee of the animal health unit of Swiss pharmaceutical giant Novartis until its acquisition by Elanco. Mr. Kamphuis joined Novartis Animal Health in 2005, and held several executive positions from 2012 to 2014 as General Manager North American and as Chief Operating Officer from 2009 to 2012 and Head of Global Marketing and Business Development from 2005 to 2009. Prior thereto, Mr. Kamphuis spent 20 years in various executive, business development and global marketing roles at Pfizer/Pharmacia Animal Health and Merial/Merck AgVet. Mr. Kamphuis served a total of 10 years on the IFAH-Europe board, of which 9 years as treasurer. Mr. Kamphuis holds a B.A. in Marketing from the Dutch Institute of Marketing, Amsterdam, the Netherlands, and a MSc in Animal Nutrition from the Wageningen University and Research Center, Wageningen, the Netherlands.

Jaguar believes Mr. Kamphuis is qualified to serve on Jaguar's board of directors due to his extensive experience and education in the animal health sector and is an experienced executive and strategist in animal health care companies who designs creative and effective companies.

John Micek III. Mr. Micek has served as a member of Jaguar's board of directors since April 2016. From 2000 to 2010, Mr. Micek was managing director of Silicon Prairie Partners, LP, a Palo Alto, California based family-owned venture fund. Since 2010, Mr. Micek has been managing partner of Verdant Ventures, a merchant bank dedicated to sourcing and funding university and corporate laboratory spinouts in areas including pharmaceuticals and cleantech. Mr. Micek serves on the board of directors of Armanino Foods of Distinction, Innovare Corporation and JAL/Universal Assurors. He is also a board member and the Chief Executive Officer and Chief Financial Officer of Enovo Systems and from March 2014 to August 2015 he served as interim Chief Financial Officer for Smith Electric Vehicles, Inc. Mr. Micek is a cum laude graduate of Santa Clara University and the University of San Francisco School of Law, and is a practicing California attorney specializing in financial services.

Jaguar believes Mr. Micek is qualified to serve on Jaguar's board of directors due to his many years of executive experience in management and on boards of director.

Ari Azhir, Ph.D. Dr. Azhir has served as a member of Jaguar's board of directors since December 2016. Dr. Azhir is an entrepreneur and founder and CEO of two companies focused on central nervous system (CNS) therapeutics: Neuraltus Pharmaceuticals and Neurocea LLC. She has broad experience launching and building life science companies and has successfully commercialized and brought more than 20 healthcare products to market, ranging from small molecule pharmaceuticals for CNS and dermatology to disruptive technologies in medical devices. These technologies include flow cytometry products at Becton Dickinson and ultrasound devices at Accuson, where she held executive management positions. Dr. Azhir has wide-ranging drug development experience and has filed an NDA and gained approval for Luxiq®, a drug that has been successfully commercialized. She also has extensive experience building strong patent portfolios and is the key inventor and patent holder of 12 patents. She serves on the translational research board of UCSF and has served on private boards (Polar Springs and Neuraltus), as well as nonprofit boards (The Hearing Society and American Women in Science). Dr. Azhir received her B.SC in Biochemistry and Mathematics, as well as her M.Ph. in Biophysics, from Kings' College, London University, and received a PhD. in Biophysics from Tehran University.

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Jaguar believes Dr. Azhir is qualified to serve on Jaguar's board of directors due to her many years of executive experience in management and on boards of director and her human heath experience.

Corporate Governance

Board Composition and Risk Oversight

Jaguar's business and affairs are managed under the direction of its board of directors, which consists of seven members. Six of the seven directors that comprise Jaguar's board are independent within the meaning of the independent director rules of The NASDAQ Stock Market, LLC, or NASDAQ.

Jaguar's board of directors is divided into three classes of directors. At each special meeting of stockholders, a class of directors will be elected for a three-year term to succeed the class whose term is then expiring. The terms of the directors will expire upon the election and qualification of successor directors at the special meeting of stockholders to be held during the years 2018 for the Class III directors, 2019 for the Class I directors and 2020 for the Class II directors.

The Class I directors are Ms. Conte, Mr. Bochnowski and Dr. Azhir.

The Class II directors are Mr. Qiu and Mr. Micek.

The Class III directors are Dr. Yang and Mr. Kamphuis.

Jaguar expects that any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of Jaguar's board of directors into three classes with staggered three-year terms may delay or prevent a change of its management or a change in control.

Jaguar's board of directors has an active role, as a whole and at the committee level, in overseeing the management of Jaguar's risks. Its board of directors is responsible for general oversight of risks and regular review of information regarding Jaguar's risks, including credit risks, liquidity risks and operational risks. Jaguar's compensation and nominating committees are responsible for overseeing the management of risks relating to Jaguar's executive compensation plans and arrangements and the risks associated with the independence of Jaguar's board of directors and potential conflicts of interest. Jaguar's audit committee is responsible for overseeing the management of Jaguar's risks relating to accounting matters and financial reporting. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, Jaguar's entire board of directors is regularly informed through discussions from committee members about such risks. Jaguar's board of directors believes Jaguar's administration of risk oversight function has not affected the leadership structure of Jaguar's board.

Director Independence

Jaguar's common stock is listed on The NASDAQ Capital Market. Under the NASDAQ rules, independent directors must comprise a majority of a listed company's board of directors. In addition, NASDAQ rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating committee be independent. Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Under the NASDAQ rules, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

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To be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, Jaguar's board of directors, or any other board committee (1) accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or (2) be an affiliated person of the listed company or any of its subsidiaries.

In February 2017, Jaguar's board of directors undertook a review of its composition, the composition of its committees and the independence of Jaguar's directors and considered whether any director has a material relationship with Jaguar that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, Jaguar's board of directors has determined that six of its seven directors do not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the NASDAQ rules. Jaguar's board of directors also determined that Mr. Micek (chairperson), Mr. Bochnowski, Mr. Qiu, Dr. Yang and Dr. Azhir, who comprise Jaguar's Audit Committee, Mr. Bochnowski (chairperson), Mr. Kamphuis, Mr. Micek and Dr. Azhir, who comprise Jaguar's Compensation Committee, and Mr. Bochnowski (chairperson), Mr. Kamphuis and Mr. Micek, who comprise Jaguar's Nominating Committee, satisfy the independence standards for those committees established by applicable SEC rules and the NASDAQ rules and listing standards.

In making this determination, Jaguar's board of directors considered the relationships that each non-employee director has with Jaguar and all other facts and circumstances Jaguar's board of directors deemed relevant in determining independence, including the beneficial ownership of Jaguar's capital stock by each non-employee director.

Meetings and Committees of the Board of Directors

Audit Committee

The members of Jaguar's audit committee are Mr. Micek Mr. Bochnowski, Mr. Qiu, Dr. Yang and Dr. Azhir. Mr. Micek is the chairperson of the audit committee. The audit committee's responsibilities include:

appointing, approving the compensation of, and assessing the independence of Jaguar's registered public accounting firm;

overseeing the work of Jaguar's independent registered public accounting firm, including through the receipt and consideration of reports from that firm;

reviewing and discussing with management and Jaguar's independent registered public accounting firm Jaguar's annual and quarterly financial statements and related disclosures;

monitoring Jaguar's internal control over financial reporting, disclosure controls and procedures and code of conduct;

discussing Jaguar's risk management policies;

establishing policies regarding hiring employees from Jaguar's independent registered public accounting firm and procedures for the receipt and retention of accounting related complaints and concerns;

reviewing and approving or ratifying any related person transactions; and

preparing the audit committee report required by SEC rules.

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The audit committee of the combined company is expected to retain the same members and the same duties and responsibilities following completion of the merger. All audit and non-audit services, other than *de minimis* non-audit services, to be provided to Jaguar by Jaguar's independent registered public accounting firm must be approved in advance by Jaguar's audit committee.

Jaguar's board of directors has determined that each of Mr. Micek, Mr. Bochnowski, Mr. Qiu, Dr. Yang and Dr. Azhir is an independent director under NASDAQ rules and under Rule 10A-3. All members of Jaguar's audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and NASDAQ. Jaguar's board of directors has determined that Mr. Micek is an "audit committee financial expert," as defined by applicable SEC rules, and has the requisite financial sophistication as defined under the applicable NASDAQ rules and regulations.

Jaguar's audit committee held one meeting in 2016. The audit committee has adopted a written charter approved by the Jaguar's Board of Directors, which is available on Jaguar's website at: http://phx.corporate-ir.net/phoenix.zhtml?c=253723&p=irol-govhighlights

Compensation Committee

The members of Jaguar's compensation committee are Mr. Bochnowski, Mr. Kamphuis, Mr. Micek and Dr. Azhir. Mr. Bochnowski is the chairperson of the compensation committee. The compensation committee's responsibilities include:

- determining, or making recommendations to Jaguar's board of directors with respect to, the compensation of Jaguar's Chief Executive Officer;
- determining, or making recommendations to Jaguar's board of directors with respect to, the compensation of Jaguar's other executive officers;
- overseeing and administering Jaguar's cash and equity incentive plans;
- reviewing and making recommendations to Jaguar's board of directors with respect to director compensation;
- reviewing and discussing at least annually with management Jaguar's "Compensation Discussion and Analysis" disclosure if and to the extent then required by SEC rules; and
- preparing the compensation committee report and necessary disclosure in Jaguar's annual proxy statement in accordance with applicable SEC rules.

The compensation committee of the combined company is expected to retain the same members and the same duties and responsibilities following completion of the merger. Jaguar's board has determined that each of Mr. Bochnowski, Mr. Kamphuis, Mr. Micek and Dr. Azhir is independent under the applicable NASDAQ rules and regulations, is a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act, and is an "outside director" as that term is defined in Section 162(m) of the Internal Revenue Code of 1986, as amended.

Jaguar's Compensation Committee held one meeting in 2016. All compensation-related matters were approved at the Board level. The Compensation Committee has adopted a written charter approved by Jaguar's Board of Directors, which is available on Jaguar's website at: http://phx.corporate-ir.net/phoenix.zhtml?c=253723&p=irol-govhighlights

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Nominating Committee

The members of Jaguar's nominating committee are Mr. Bochnowski, Mr. Kamphuis and Mr. Micek. Mr. Bochnowski is the chairperson of the nominating committee. The nominating committee's responsibilities include:

- identifying individuals qualified to become members of Jaguar's board of directors;
- evaluating qualifications of directors;
- recommending to Jaguar's board of directors the persons to be nominated for election as directors and to each of the committees of Jaguar's board of directors; and
- overseeing an annual evaluation of Jaguar's board of directors.

The nomination committee of the combined company is expected to retain the same members and the same duties and responsibilities following completion of the merger. Jaguar's Nominating Committee held one meeting in 2016. All nomination-related matters were approved at the Board level. The Nominating Committee has adopted a written charter approved by Jaguar's Board of Directors, which is available on Jaguar's website at: http://investors.jaguaranimalhealth.com/phoenix.zhtml?c=253723&p=irol-govhighlights.

Meetings and Attendance During 2016

Jaguar's board held ten meetings in 2016. With one exception (as described below), each director who served as a director during 2016 participated in 75% or more of the meetings of Jaguar's board and of the committees on which he or she served, if any, during the year ended December 31, 2016 (during the period that such director served). Dr. Yang attended one of the ten meetings of the Jaguar Board and all of the meetings of the Audit Committee on which he served during the year ended December 31, 2016.

Jaguar does not have a written policy on board attendance at annual meetings of stockholders. Jaguar encourages, but do not require, Jaguar's directors to attend Jaguar's annual meeting.

Code of Business Conduct and Ethics

Jaguar has adopted a Code of Business Conduct and Ethics that applies to its directors, officers and employees, including its President and Chief Executive Officer, its Chief Financial Officer, and other employees who perform financial or accounting functions. The Code of Business Conduct and Ethics sets forth the basic principles that guide the business conduct of Jaguar's employees. A current copy of the code is on Jaguar's website at http://investors.jaguaranimalhealth.com/phoenix.zhtml?c=253723&p=irol-govhighlights. Jaguar intends to disclose future amendments to certain provisions of Jaguar's Code of Business Conduct and Ethics, or waivers of such provisions on its website to the extent required by applicable rules and exchange requirements. The inclusion of Jaguar's website address in this joint proxy statement/prospectus does not incorporate by reference the information on or accessible through such website into this joint proxy statement/prospectus.

Compensation Committee Interlocks and Insider Participation

None of the members of Jaguar's compensation committee has ever been an officer or employee of Jaguar. None of Jaguar's executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee or other board committee performing equivalent functions of any entity that has one or more of its executive officers serving on Jaguar's board of directors or compensation committee.

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Limitation of Liability and Indemnification

Jaguar's second amended and restated certificate of incorporation and amended and restated bylaws contain provisions that limit the personal liability of its directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable to such corporation or its stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the directors duty of loyalty to such corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law, or DGCL; or
- any transaction from which the director derived an improper personal benefit.

Such limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies, such as injunctive relief or rescission.

Jaguar's second amended and restated certificate of incorporation provides that Jaguar indemnify its directors to the fullest extent permitted by Delaware law. In addition, Jaguar's amended and restated bylaws provide that Jaguar indemnify its directors and officers to the fullest extent permitted by Delaware law. Jaguar's amended and restated bylaws also provide that Jaguar shall advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding, and permit Jaguar to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity, regardless of whether Jaguar would otherwise be permitted to indemnify him or her under the provisions of Delaware law. Jaguar has entered and expects to continue to enter into agreements to indemnify its directors, executive officers and other employees as determined by its board of directors. With certain exceptions, these agreements provide for indemnification for related expenses including, among others, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. Jaguar believes that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. Jaguar also maintains directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in Jaguar's second amended and restated certificate of incorporation and amended and restated bylaws and its indemnification agreements may discourage stockholders from bringing a lawsuit against its directors for breach of their fiduciary duty of care. They may also reduce the likelihood of derivative litigation against Jaguar's directors and officers, even though an action, if successful, might benefit Jaguar and other stockholders. Furthermore, a stockholder's investment may be adversely affected to the extent that Jaguar pays the costs of settlement and damage awards against directors and officers. There is no pending litigation or proceeding involving any of Jaguar's directors, officers or employees for which indemnification is sought, and Jaguar is not aware of any threatened litigation that may result in claims for indemnification.

Board Leadership Structure

Jaguar's second amended and restated bylaws and corporate governance guidelines provide the board of directors with flexibility in its discretion to combine or separate the positions of chairperson of the board and chief executive officer. As a general policy, Jaguar's board of directors believes that separation of the positions of chairperson and chief executive officer reinforces the independence of the board of directors from management, creates an environment that encourages objective oversight of

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management's performance and enhances the effectiveness of the board of directors as a whole. Jaguar expects and intends the positions of chairperson of the board and chief executive officer to be held by two individuals in the future.

Risk Oversight

Jaguar's board of directors monitors its exposure to a variety of risks through Jaguar's Audit Committee. Jaguar's Audit Committee charter gives the Audit Committee responsibilities and duties that include discussing with management and the independent auditors Jaguar's major financial risk exposures and the steps management has taken to monitor and control such exposures, including Jaguar's risk assessment and risk management policies.

Nomination of Directors

There have been no material changes to the procedures by which stockholders may recommend nominees to Jaguar's Board of Directors. Recommendations to Jaguar's Board of Directors for election as directors of Jaguar at an annual meeting may be made only by the Nominating Committee or by Jaguar's stockholders (through the Nominating Committee) who comply with the timing, informational, and other requirements of Jaguar's bylaws. Stockholders have the right to recommend persons for nomination by submitting such recommendation, in written form, to the Nominating Committee, and such recommendation will be evaluated pursuant to the policies and procedures adopted by Jaguar's board. Such recommendation must be delivered to or mailed to and received by the Secretary of Jaguar at the principal executive offices not later than 120 calendar days prior to the anniversary of the date Jaguar's prior year proxy statement was first made available to stockholders, except that if no annual meeting of stockholders was held in the preceding year or if the date of the annual meeting of stockholders has been changed by more than 30 calendar days from the date contemplated at the time of the preceding year's proxy statement, the notice shall be received by the Secretary at Jaguar's principal executive offices not less than 150 calendar days prior to the date of the contemplated annual meeting or the date that is 10 calendar days after the date of the first public announcement or other notification to stockholders of the date of the contemplated annual meeting, whichever first occurs. The deadline to submit recommendations for election as directors at the 2017 Annual Meeting has already passed. Jaguar stockholders who wish to present proposals for inclusion in the proxy materials to be distributed in connection with next year's Annual Meeting proxy statement must submit their proposals so that they are received by Jaguar before December 18, 2016, which is 120 calendar days before April 17, the date on which Jaguar's prior year's proxy statement was first made available to Jaguar's stockholders. Jaguar's Board of Directors has not yet determined the date of the 2018 Annual Meeting of Jaguar's Stockholders, but does not currently anticipate that the date will be changed by more than 30 calendar days from the date of this year's annual meeting.

Jaguar's Nominating Committee, in accordance with the Jaguar board's governance principles, seeks to create a board that has the ability to contribute to the effective oversight and management of Jaguar, that is as a whole strong in its collective knowledge of and diversity of skills and experience with respect to accounting and finance, management and leadership, vision and strategy, business judgment, biotechnology industry knowledge, corporate governance and global markets. When the Nominating Committee reviews a potential new candidate, the Nominating Committee looks specifically at the candidate's qualifications in light of the needs of Jaguar's board and Jaguar at that time given the then current mix of director attributes.

General criteria for the nomination and evaluation of director candidates include:

- loyalty and commitment to promoting the long term interests of Jaguar's stockholders;

- the highest personal and professional ethical standards and integrity;

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- an ability to provide wise, informed and thoughtful counsel to top management on a range of issues;
- a history of achievement that reflects superior standards for themselves and others;
- an ability to take tough positions in constructively-challenging Jaguar's management while at the same time working as a team player; and
- individual backgrounds that provide a portfolio of personal and professional experience and knowledge commensurate with the needs of Jaguar.

The Nominating Committee must also ensure that the members of the board as a group maintain the requisite qualifications under the applicable NASDAQ Stock Market listing standards for populating the Audit, Compensation and Nominating Committees.

Written recommendations from a stockholder for a director candidate must include the following information:

- the stockholder's name and address, as they appear on Jaguar's corporate books;
- the class and number of shares that are beneficially owned by such stockholder;
- the dates upon which the stockholder acquired such shares; and
- documentary support for any claim of beneficial ownership.

Additionally, the recommendation needs to include, as to each person whom the stockholder proposes to recommend to the Nominating Committee for nomination to election or reelection as a director, all information relating to the person that is required pursuant to Regulation 14A under the Exchange Act, as amended, and evidence satisfactory to us that the nominee has no interests that would limit their ability to fulfill their duties of office.

Once Jaguar's Nominating Committee receives a recommendation, it will deliver a questionnaire to the director candidate that requests additional information about his or her independence, qualifications and other information that would assist the Nominating Committee in evaluating the individual, as well as certain information that must be disclosed about the individual in Jaguar's proxy statement, if nominated. Individuals must complete and return the questionnaire within the time frame provided to be considered for nomination by the Nominating Committee.

The Nominating Committee will review the stockholder recommendations and make recommendations to Jaguar's Board of Directors that the Committee feels are in the best interests of Jaguar and its stockholders.

The Nominating Committee has not received any recommendations from stockholders for the 2018 Annual Meeting.

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Communications with Jaguar's Board of Directors

Stockholders may contact an individual director or Jaguar's board as a group, or a specified board committee or group, including the non-employee directors as a group, by the following means:

Mail: Attn: Board of Directors
Jaguar Animal Health, Inc.
201 Mission Street, Suite 2375
San Francisco, CA 94105
Email: AskBoard@jaguaranimalhealth.com

Each communication should specify the applicable addressee or addressees to be contacted as well as the general topic of the communication. Jaguar will initially receive and process communications before forwarding them to the addressee. Jaguar also may refer communications to other departments within Jaguar. Jaguar generally will not forward to the directors a communication that is primarily commercial in nature, relates to an improper or irrelevant topic, or requests Jaguar's general information.

Complaint and Investigation Procedures for Accounting, Internal Accounting Controls, Fraud or Auditing Matters

Jaguar has created procedures for confidential submission of complaints or concerns relating to accounting or auditing matters and contracted with NASDAQ to facilitate the gathering, monitoring and delivering reports on any submissions. As of the date of this report, there have been no submissions of complaints or concerns to NASDAQ. Complaints or concerns about Jaguar's accounting, internal accounting controls or auditing matters may be submitted to Jaguar's Audit Committee and Jaguar's executive officers by contacting NASDAQ. NASDAQ provides phone, internet and e-mail access and is available 24 hours per day, seven days per week, 365 days per year. The hotline number is 1-844-417-8861 and the website is https://www.openboard.info/jagx. Any person may submit a written Accounting Complaint to jagx@openboard.info.

Jaguar's Audit Committee under the direction and oversight of the Audit Committee Chair will promptly review all submissions and determine the appropriate course of action. The Audit Committee Chair has the authority, in his discretion, to bring any submission immediately to the attention of other parties or persons, including the full Board, accountants and attorneys. The Audit Committee Chair shall determine the appropriate means of addressing the concerns or complaints and delegate that task to the appropriate member of senior management, or take such other action as it deems necessary or appropriate to address the complaint or concern, including obtaining outside counsel or other advisors to assist Jaguar's Audit Committee.

Director Compensation

Jaguar currently does not pay its directors any cash compensation for their services on Jaguar's board of directors. Jaguar intends to make annual equity grants to directors serving on its board who are not employees nor serving as designees of Jaguar's investors, along with an additional equity grant to the Chairperson of its board of directors. Jaguar may in the future determine to make additional equity grants or pay other equity compensation for service on its board of directors.

In June 2014, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 39,410 shares of common stock at an exercise price of $4.83 per share, which expires 10 years after the grant date. The option vests as follows: 25% vests on March 2, 2015, 9 months after the grant date, with the remainder vesting equally over the next 27 months such that the option is vested in full on June 2, 2017.

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In June 2015, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 20,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 11,293 shares of common stock at an exercise price of $1.58 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In September 2016, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 75,000 shares of common stock at an exercise price of $1.25 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In December 2016, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 16,378 shares of common stock at an exercise price of $0.74 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

Mr. Kamphuis provided consulting services through Kernel Management and Consulting AG from December 2015 through March 2016.

In June 2015, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 50,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 9,504 shares of common stock at an exercise price of $1.58 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In August 2016, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 50,000 shares of common stock at an exercise price of $1.47 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In September 2016, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 13,000 shares of common stock at an exercise price of $1.25 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In December 2016, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 13,771 shares of common stock at an exercise price of $0.74 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In June 2015, Jaguar granted Mr. Qui, a member of the Audit Committee, a stock option to acquire 10,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Mr. Qui, a member of the Audit Committee, a stock option to acquire 1,901 shares of common stock at an exercise price of $1.58 per share, which expires 10 years

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after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In June 2015, Jaguar granted Dr. Yang, a member of the Audit Committee, a stock option to acquire 10,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Dr. Yang, a member of the Audit Committee, a stock option to acquire 1,901 shares of common stock at an exercise price of $1.58 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Mr. Micek, , a member of the Audit, Compensation and Nominating Committees, a stock option to acquire 96,824 shares of common stock at an exercise price of $1.58 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In December 2016, Jaguar granted Mr. Micek, a member of the Audit, Compensation and Nominating Committees, a stock option to acquire 10,884 shares of common stock at an exercise price of $0.74 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In December 2016, Jaguar granted Dr. Azhir, a member of the Audit and Compensation Committees, a stock option to acquire 98,050 shares of common stock at an exercise price of $0.74 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

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INFORMATION ABOUT THE JAGUAR SPECIAL MEETING AND VOTE

Date, Time and Place of the Special Meeting

These proxy materials are delivered in connection with the solicitation by the Jaguar Board of proxies to be voted at the Jaguar special meeting, which is to be held at 201 Mission Street, Suite 2375, San Francisco, CA 94105, at 2:30 p.m., local time, on July 27, 2017. On or about [•], 2017 Jaguar commenced mailing this joint proxy statement/prospectus and the enclosed form of proxy to its stockholders entitled to vote at the meeting.

IMPORTANT NOTICE REGARDING THE INTERNET AVAILABILITY OF PROXY MATERIALS FOR THE JAGUAR 2017 SPECIAL MEETING OF STOCKHOLDERS TO BE HELD JULY 27, 2017

This Joint Proxy Statement/Prospectus is available at the following website address: www.jaguaranimalhealth.com. You are encouraged to access and review all of the important information contained in the proxy materials before voting.

Purpose of the Jaguar Special Meeting

Jaguar stockholders will be asked to vote on the following proposals:

1. To approve the issuance of shares of Jaguar common stock and non-voting common stock pursuant to the Agreement and Plan of Merger, dated as of March 31, 2017, by and among Jaguar Animal Health, Inc., Napo Acquisition Corporation, Napo Pharmaceuticals, Inc., and a representative of Napo Pharmaceuticals, Inc. (sometimes referred to as the merger agreement). A copy of the merger agreement has been included as *Annex A* to this joint proxy statement/prospectus.

2. To approve the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019.

3. To approve the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to Invesco, pursuant to the Commitment Letter.

4. To approve the issuance of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018.

5. To approve the amendment of the 2014 Plan to increase the number of shares of Jaguar common stock authorized for issuance under the 2014 Plan by 6,500,188 shares.

6. To approve Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc." A copy of Jaguar's Third Amended and Restated Certificate of Incorporation has been included as *Annex B* to this joint proxy statement/prospectus.

7. To approve Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock.

8. To approve Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock.

9. To adjourn the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to approve (i) the issuance of shares of Jaguar common stock described in Proposals 1-4, (ii) the

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amendment of the 2014 Plan described in Proposal 5, (iii) the increase in the number of authorized shares of common stock described in Proposal 6, (iv) the authorization of a class of non-voting common stock described in Proposal 7, and/or (v) the requirement to obtain Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock described in Proposal 8.

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

It is a condition to completion of the merger that holders of Jaguar common stock approve Proposals 1 and 6-8, voting together as a single class.

At the effective time of the merger, (i) each issued and outstanding share of Napo common stock (other than dissenting shares and shares held by Jaguar or Napo) will be converted into a contingent right to receive (x) up to a whole number of shares of Jaguar common stock comprising in the aggregate up to approximately 20.2% of the fully diluted shares of Jaguar common stock immediately following the consummation of the merger, which contingent right will vest only if the resale of the Tranche A Shares to third parties provides Nantucket with sufficient cash proceeds to meet the applicable Hurdle Amount and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units, (ii) existing creditors of Napo will receive an aggregate of not more than 2,282,445 shares of Jaguar common stock and not more than 42,957,072 shares of Jaguar non-voting common stock in full satisfaction of all existing indebtedness then owed by Napo to such creditors, and (iii) an existing Napo stockholder will be issued an aggregate of approximately 3,243,243 shares of Jaguar common stock in return for $3 million of new funds invested into Jaguar by such investor.

Shares of Jaguar non-voting common stock are the same in all respects to shares of Jaguar's common stock, except that holders of shares of non-voting common stock are not entitled to vote on matters submitted to Jaguar stockholders other than a change of control of Jaguar, and shares of non-voting common stock are convertible into shares of common stock on a one-for-one basis (i) at the option of the respective holders thereof, at any time and from time to time on or after April 1, 2018 or (ii) automatically, without any payment of additional consideration by the holder thereof, (x) upon a transfer of such shares to any person or entity that is neither an affiliate of Nantucket nor an investment fund, investment vehicle or other account, that is, directly or indirectly, managed or advised by Nantucket or any of its affiliates pursuant to a sale of such stock to a third-party for cash in accordance with the terms and condition set forth in the Investor Rights Agreement, or (y) upon the release or transfer of such shares to the Napo Legacy Stockholders.

Jaguar will assume (i) each outstanding and unexercised option to purchase Napo common stock, which will be converted into options to purchase Jaguar common stock, (ii) each outstanding warrant to purchase Napo common stock, which will be converted into warrants to purchase Jaguar common stock, and (iii) each outstanding restricted stock unit to acquire Napo common stock, which will be converted into restricted stock units to acquire Jaguar common stock.

The stockholders of Jaguar will continue to own their existing shares and the rights and privileges of their existing shares will not be affected by the merger. However, because Jaguar will be issuing new shares of Jaguar common stock and non-voting common stock to Napo creditors, contingent rights to receive Jaguar common stock to Napo stockholders, and options, warrants and restricted stock units exercisable for Jaguar common stock to holders of Napo options, warrants and restricted stock units in the merger, the stockholders of Jaguar will experience dilution as a result of the issuance of shares in the merger and each outstanding share of Jaguar common stock immediately prior to the merger will represent a smaller percentage of the total number of shares of Jaguar common stock and non-voting common stock issued and outstanding after the merger. It is expected that Jaguar stockholders before

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the merger will hold approximately 25% of the total Jaguar common stock and non-voting common stock issued and outstanding immediately following completion of the merger. Thus, Jaguar stockholders before the merger will experience dilution in the amount of approximately 75% as a result of the merger.

Under NASDAQ Marketplace Rule 5635(a), a company listed on The NASDAQ Capital Market is required to obtain stockholder approval in connection with a merger with another company if the number of shares of common stock or securities convertible into common stock to be issued is in excess of 20% of the number of shares of common stock then outstanding. Based upon the current number of issued and outstanding shares of Jaguar common stock, if the merger is completed, it is estimated that an aggregate of approximately 69,299,346 shares of Jaguar common stock will be issued upon the closing of the merger to the Napo Stakeholders, assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more. The aggregate number of shares of Jaguar common stock and non-voting common stock to be issued in connection with the merger and related Napo debt settlement will exceed 20% of the shares of Jaguar common stock issued and outstanding on the record date for the Jaguar special meeting. For these reasons Jaguar must obtain the approval of Jaguar stockholders for the issuance of these securities to the Napo Stakeholders in connection with the merger, the debt settlements and new financings described herein.

Record Date and Voting Power

Only stockholders of record as of the close of business on June 30, 2017 will be entitled to notice of and to vote at the special meeting or at any subsequent meeting due to an adjournment of the original meeting.

On the record date, Jaguar had two classes of voting stock, common stock and preferred stock, of which [•] shares of common stock were issued and outstanding and zero shares of preferred stock were issued and outstanding. Each outstanding share of common stock entitles the holder to one vote on all matters to be voted upon at the special meeting.

A complete list of stockholders entitled to vote at the Jaguar special meeting will be available for examination by any Jaguar stockholder at Jaguar's headquarters, 201 Mission Street, Suite 2375, San Francisco, CA 94105, for purposes pertaining to the Jaguar special meeting, during normal business hours for a period of ten days before the Jaguar special meeting, and at the time and place of the Jaguar special meeting.

Quorum and Voting Rights

A quorum is the number of shares that must be represented at a meeting to lawfully conduct business. The presence, in person or by proxy, of holders of a majority of the Jaguar common stock issued and outstanding and entitled to vote at the special meeting constitutes a quorum for the transaction of business. Proxies received but marked as abstentions, if any, and broker non-votes, if any, will be included in the calculation of the number of shares considered to be present at the Jaguar special meeting for purposes of determining a quorum. As of the record date, a total of [•] shares of common stock were outstanding and eligible to vote at the Jaguar special meeting.

Required Vote

To approve the issuance of shares of Jaguar common stock and non-voting common stock in the transactions contemplated by the merger agreement (Proposal 1), the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019 (Proposal 2), the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to

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Invesco, pursuant to the Invesco Commitment Letter (Proposal 3), and the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018 (Proposal 4), the affirmative vote of the holders of a majority of shares of Jaguar common stock cast affirmatively or negatively (excluding abstentions and broker non-votes), present in person or by remote communication, if applicable, or represented by proxy, voting together as a single class and entitled to vote, is required. Although failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares will not affect the outcome of the vote on the proposal to approve the issuance of shares of Jaguar common stock and non-voting common stock, the failure to submit a proxy or vote in person at the special meeting will make it more difficult to meet the requirement under Jaguar's bylaws that the holders of a majority of the Jaguar capital stock issued and outstanding and entitled to vote at the special meeting be present in person or by remote communication or represented by proxy to constitute a quorum at the special meeting.

To approve the amendment of the 2014 Plan (Proposal 5), the affirmative vote of a majority of the outstanding shares of Jaguar common stock, voting together as a single class and entitled to vote, is required for such proposal. Because approval is based on the affirmative vote of a majority of the outstanding shares of Jaguar common stock entitled to vote, a Jaguar stockholder's failure to vote in person or by proxy at the special meeting, or an abstention from voting, or the failure of a holder of Jaguar common stock who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote **"AGAINST"** adoption of this proposal.

To approve the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc." (Proposal 6), the affirmative vote of a majority of the outstanding shares of Jaguar common stock, voting together as a single class and entitled to vote, is required for such proposal. Because approval is based on the affirmative vote of a majority of the outstanding shares of Jaguar common stock entitled to vote, a Jaguar stockholder's failure to vote in person or by proxy at the special meeting, or an abstention from voting, or the failure of a holder of Jaguar common stock who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote **"AGAINST"** adoption of this proposal.

To approve the authorization of a class of non-voting common stock (Proposal 7), the affirmative vote of a majority of the outstanding shares of Jaguar common stock, voting together as a single class and entitled to vote, is required for such proposal. Because approval is based on the affirmative vote of a majority of the outstanding shares of Jaguar common stock entitled to vote, a Jaguar stockholder's failure to vote in person or by proxy at the special meeting, or an abstention from voting, or the failure of a holder of Jaguar common stock who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote "**AGAINST"** adoption of this proposal.

To approve the requirement to obtain Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock (Proposal 8), the affirmative vote of a majority of the outstanding shares of Jaguar common stock, voting together as a single class and entitled to vote, is required for such proposal. Because approval is based on the affirmative vote of a majority of the outstanding shares of Jaguar common stock entitled to vote, a Jaguar stockholder's failure to vote in person or by proxy at the special meeting, or an abstention from voting, or the failure of a holder of Jaguar common stock who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote "**AGAINST"** adoption of this proposal.

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To approve the adjournment of the special meeting, if necessary or advisable to solicit additional proxies if there are not sufficient votes to approve (i) the issuance of shares described in Proposals 1 through 4, (ii) the amendment of the 2014 Plan described in Proposal 5, and/or (iii) the amendments to Jaguar's Third Amended and Restated Certificate of Incorporation described in Proposals 6 through 8 at the time of the special meeting (Proposal 9), the affirmative vote of the holders of a majority of shares of Jaguar common stock voting together as a single class, entitled to vote thereon, if a quorum is present, is required. The chairman of the meeting may also (regardless of the outcome of the stockholder vote on adjournment) adjourn the meeting to another place, date and time. If a quorum is not present, a majority of the voting stock present in person, or by remote communication, if applicable, or represented by proxy, or the chairman of the meeting, may adjourn the meeting until a quorum is present. Shares held by stockholders who are not present at the special meeting in person or by remote communication or not represented by proxy will have no effect on the outcome of any vote to adjourn the special meeting. Broker non-votes and abstentions will have no effect on the outcome of any vote to adjourn the special meeting if a quorum is present but will have the same effect as a vote **"AGAINST"** if no quorum is present.

Broker Non-Votes

If you are a beneficial owner of shares held in street name and do not provide the organization that holds your shares with specific voting instructions, under the rules of various national and regional securities exchanges, the organization that holds your shares may generally vote on routine matters but cannot vote on non-routine matters. If the organization that holds your shares does not receive instructions from you on how to vote your shares on a non-routine matter, the organization that holds your shares does not have the authority to vote on the matter with respect to those shares. This is generally referred to as a "broker non-vote." Broker non-votes, if any, will be counted as being present at the special meeting for purposes of determining a quorum, but will not be voted on those matters for which specific authorization is required. Under the current rules of The NASDAQ Stock Market, brokers do not have discretionary authority to vote on any of Jaguar's proposals. Therefore, if you do not provide voting instruction to your broker, your shares will not be voted on the proposal to approve any of Jaguar's proposals. A broker non-vote will have no effect on the outcome of the proposals to issue the Jaguar common stock and non-voting common stock in the transactions contemplated by the merger agreement or upon conversion of the Convertible Promissory Note, due August 2, 2018. A broker non-vote will have the same effect as a vote **"AGAINST"** the amendment of the 2014 Plan and the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation. A broker non-vote will have no effect on the outcome of any vote on the proposal to adjourn the special meeting if a quorum is present but will have the same effect as a vote **"AGAINST"** if no quorum is present.

Abstentions; Non-Voting

For the proposals to approve the issuance of shares of Jaguar common stock and non-voting common stock as contemplated by the merger agreement and upon conversion of the Convertible Promissory Note, due August 2, 2018, an abstention or a failure to submit a proxy will not affect the outcome of the vote for the proposal, but it will make it more difficult to meet the requirement under Jaguar's bylaws that the holders of a majority of the Jaguar capital stock issued and outstanding and entitled to vote at the special meeting be present in person or by proxy to constitute a quorum at the special meeting.

For the proposal to approve the amendment of the 2014 Plan, an abstention or failure to submit a proxy will have the same effect as a vote **"AGAINST"** such proposal.

For the proposal to approve the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change in the Jaguar corporate name to "Jaguar Health, Inc." as contemplated

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by the merger agreement, an abstention or failure to submit a proxy will have the same effect as a vote **"AGAINST"** such proposal.

For the proposal to approve the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock as contemplated by the merger agreement, an abstention or failure to submit a proxy will have the same effect as a vote **"AGAINST"** such proposal.

For the proposal to approve the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock as contemplated by the merger agreement, an abstention or failure to submit a proxy will have the same effect as a vote **"AGAINST"** such proposal.

For the proposal to adjourn the Jaguar special meeting, if necessary or advisable, an abstention or a failure to submit a proxy will not affect the outcome of the vote for the proposal if a quorum is present but will have the same effect as a vote cast **"AGAINST"** such proposal if no quorum is present.

Appraisal Rights; Trading of Shares

Under Delaware law, Jaguar stockholders are not entitled to appraisal rights in connection with the issuance of shares of Jaguar common stock and non-voting common stock as contemplated by the merger agreement. It is anticipated that shares of Jaguar common stock will continue to be traded on The NASDAQ Capital Market during the pendency of and following the effectiveness of the merger. Shares of Jaguar non-voting common stock will not trade on any stock exchange. Jaguar's corporate status will not change because the merger is being consummated between one of its subsidiaries and Napo.

Shares Beneficially Owned by Jaguar Directors and Executive Officers

Jaguar's directors and executive officers beneficially owned [•] shares of Jaguar common stock on June 30, 2017, the record date for the special meeting. These shares represent in total [•]% of the total voting power of Jaguar's voting securities outstanding and entitled to vote as of the record date. Jaguar currently expects that Jaguar's directors and executive officers will vote their shares **"FOR"** all the proposals to be voted on at the special meeting, although none of them has entered into any agreements obligating them to do so.

Voting of Shares; Proxies

Stockholders of record may vote in person by ballot at the special meeting or by submitting their proxies:

by telephone, by calling the toll-free number (800) 962-4284 and following the recorded instructions;

by accessing the Internet website [www.proxyvote.com] and following the instructions on the website; or

by mail, by indicating your vote on each proxy card you receive, signing and dating each proxy card returning each proxy card in the prepaid envelope that accompanied that proxy card.

The internet and telephone proxy submission procedures are designed to authenticate stockholders and to allow them to confirm that their instructions have been properly recorded.

Stockholders of Jaguar who hold their shares in "street name" by a broker, nominee, fiduciary or other custodian should refer to the proxy card or other information forwarded by their broker, nominee, fiduciary or other custodian for instructions on how to vote their shares.

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Only proxy cards and voting instruction forms that have been signed, dated and timely returned, and only shares that have been timely voted electronically or by telephone will be counted in the quorum and voted. *The Internet and telephone voting facilities will close at 1:00 a.m. Pacific Time, July 27, 2017.*

Stockholders who vote over the Internet or by telephone need not return a proxy card or voting instruction form by mail, but may incur costs, such as usage charges, from telephone companies or Internet service providers.

Jaguar recommends you submit your proxy even if you plan to attend the special meeting. If you properly give your proxy and submit it to Jaguar in time to vote, one of the individuals named as your proxy will vote your shares as you have directed. If you attend the special meeting, you may vote by ballot, thereby cancelling any proxy previously submitted. If you hold your shares in "street name," you will have to obtain a legal proxy in your name from the broker, nominee, fiduciary or other custodian who holds your shares in order to vote in person at the special meeting. You may vote for or against the proposals or abstain from voting.

All votes will be tabulated by the inspector of elections appointed for the special meeting, who will separately tabulate affirmative and negative votes, abstentions and broker non-votes.

If you are a stockholder of record and submit your proxy but do not make specific choices, your proxy will follow the Jaguar Board's recommendations and your shares will be voted:

"FOR" the proposal to approve the issuance of shares of Jaguar common stock and non-voting common stock as contemplated by the merger agreement.

"FOR" the proposal to approve the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019.

"FOR" the proposal to approve the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to Invesco pursuant to the Invesco Commitment Letter.

"FOR" the proposal to approve the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018.

"FOR" the proposal to amend the 2014 Plan.

"FOR" the proposal to adopt Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc."

"FOR" the proposal to authorize a class of non-voting common stock.

"FOR" the proposal to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock.

"FOR" the proposal to adjourn the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to approve the above matters.

Revocability of Proxies and Changes to a Jaguar Stockholder's Vote

A Jaguar stockholder has the power to change its vote at any time before its shares are voted at the special meeting by:

notifying Jaguar's Corporate Secretary, Steven R. King, in writing at 201 Mission Street, Suite 2375, San Francisco, CA 94105, prior to the Jaguar special meeting that you are revoking your proxy;

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executing and delivering a later dated proxy card or submitting a later dated vote by telephone or on the Internet; or

by attending the Jaguar special meeting and voting your shares in person.

However, if your shares held in "street name" through a brokerage firm, bank, nominee, fiduciary or other custodian, you must check with your brokerage firm, bank, nominee, fiduciary or other custodian to determine how to revoke your proxy.

Solicitation of Proxies

The solicitation of proxies from Jaguar stockholders is made on behalf of the Jaguar Board. Jaguar will be responsible for all fees paid to the Securities and Exchange Commission and the costs of soliciting Jaguar stockholders and obtaining these proxies, including the cost of reimbursing brokers, banks and other financial institutions for forwarding proxy materials to their customers. Proxies may be solicited, without extra compensation, by Jaguar officers and employees by mail, telephone, fax, personal interviews or other methods of communication. Jaguar has engaged the firm of Computershare Trust Company, N.A. to assist Jaguar in the distribution and solicitation of proxies from Jaguar stockholders and will pay Computershare Trust Company, N.A. an estimated fee of $5,000 plus out-of-pocket expenses for its services. Napo will pay the costs of soliciting and obtaining its proxies and all other expenses related to the Napo special meeting.

Other Business; Adjournments

Jaguar is not currently aware of any other business to be acted upon at the Jaguar special meeting. If, however, other matters are properly brought before the special meeting, your proxies include discretionary authority on the part of the individuals appointed to vote your shares to act on those matters according to their best judgment.

Any adjournment may be made from time to time by the affirmative vote of the holders of a majority of the shares represented at the Jaguar special meeting in person or by proxy and entitled to vote thereat and, whether or not a quorum is present, without further notice other than by announcement at the meeting.

If the special meeting is adjourned to a different place, date or time, Jaguar need not give notice of the new place, date or time if the new place, date or time is announced at the meeting before adjournment, unless a new record date is set for the meeting. The Jaguar Board may fix a new record date if the meeting is adjourned. Proxies submitted by Jaguar stockholders for use at the special meeting will be used at any adjournment or postponement of the meeting. Unless the context otherwise requires, references to the Jaguar special meeting in this joint proxy statement/prospectus are to such special meeting as adjourned or postponed.

Attending the Meeting

Subject to space availability, all 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. Registration and seating will begin at 7:30 a.m., local time.

Jaguar Proposal 1: Approval of the Issuance of Shares of Jaguar Common Stock and Non-Voting Common Stock in the Transactions Contemplated by the Merger Agreement

At the Jaguar special meeting, holders of Jaguar common stock will be asked to approve the issuance of shares of Jaguar common stock and non-voting common stock in connection with the transactions contemplated by the merger agreement. Holders of Jaguar common stock should read this joint proxy statement/prospectus carefully and in its entirety, including the annexes, for more detailed

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information concerning the merger agreement and merger. A copy of the merger agreement is attached to this joint proxy statement/prospectus as *Annex A*.

Based upon the current number of issued and outstanding shares of Napo common stock, if the merger is completed, it is estimated that approximately 69,299,346 shares of Jaguar common stock will be issued upon the closing of the merger and related Napo refinancing, on a fully diluted basis assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more. On an as converted basis, assuming the resale of the Tranche A shares to third parties provides Nantucket with sufficient proceeds to satisfy the Hurdle Amounts, the aggregate number of shares of Jaguar common stock and non-voting common stock to be issued and issuable in connection with the transactions contemplated in the merger agreement, and related Napo refinancing will exceed 20% of the shares of Jaguar common stock issued and outstanding on the record date for the Jaguar special meeting. For these reasons Jaguar must obtain the approval of Jaguar stockholders for the issuance of shares of Jaguar common stock and non-voting stock to Napo creditors and stockholders in the transactions contemplated by the merger agreement.

Required Vote of Stockholders

To approve the issuance of shares of Jaguar common stock and non-voting common stock in the transactions contemplated by the merger agreement (this Proposal 1), the affirmative vote of the holders of a majority of shares of Jaguar common stock, present in person or by remote communication, if applicable, or represented by proxy at the special meeting, voting together as a single class and entitled to vote, is required. Although failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares will not affect the outcome of the vote on this proposal, the failure to submit a proxy or vote in person at the special meeting will make it more difficult to meet the requirement under Jaguar's bylaws that the holders of a majority of the Jaguar capital stock issued and outstanding and entitled to vote at the special meeting be present in person or by proxy to constitute a quorum at the special meeting.

Recommendation of the Jaguar Board

THE JAGUAR BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE APPROVAL OF THE ISSUANCE OF SHARES OF JAGUAR COMMON STOCK AND NON-VOTING COMMON STOCK IN CONNECTION WITH THE TRANSACTIONS CONTEMPLATED BY THE MERGER AGREEMENT.

THE MERGER IS CONDITIONED ON APPROVAL OF THIS PROPOSAL.

Jaguar Proposal 2: Approval of the Issuance of Shares of Jaguar Common Stock upon Conversion of the Kingdon Notes

At the Jaguar special meeting, holders of Jaguar common stock will be asked to approve the issuance of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, issued or issuable by Napo to certain investors in the original principal amount of up to $12,500,000, as amended on March 31, 2017. Holders of Jaguar common stock should read this joint proxy statement/prospectus carefully and in its entirety, including the annexes, for more detailed information concerning the merger agreement and merger.

Background of the Convertible Promissory Notes

On March 31, 2017, Napo entered into an Amended and Restated Note Purchase Agreement (sometimes referred to herein as the Kingdon NPA) with Kingdon Associates, M. Kingdon Offshore

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Master Fund L.P., Kingdon Family Partnership, L.P., and Kingdon Credit Master Fund L.P. (and, together with any other party purchasing Kingdon Notes (as defined below) pursuant to the Kingdon NPA, sometimes collectively referred to herein as the Kingdon Purchasers), under which remains outstanding $2,500,000 in aggregate principal amount of convertible promissory notes (sometimes referred to herein as the Kingdon Notes) issued by Napo on December 30, 2016 to such purchasers at a purchase price of $2,000,000. Subject to the consummation of the merger, the holders of the Kingdon Notes may convert the Kingdon Notes into shares of Jaguar common stock at a conversion price of $0.925 (i) from the date of the Kingdon Note until the day immediately preceding the one-year anniversary of the Kingdon Note, all, but not less than all, of one-third of the outstanding principal and interest of the Kingdon Note, (ii) from the one-year anniversary of the Kingdon Note until the day immediately preceding the two-year anniversary of the Kingdon Note, all, but not less than all, of an additional one-third of the outstanding principal and interest of the Kingdon Note, and (iii) from the two-year anniversary of the Kingdon Note and thereafter, all, but not less than all, of the outstanding principal and interest of the Kingdon Note. Subject to the satisfaction of certain conditions, each purchaser is required to purchase its pro rata portion of additional Kingdon Notes with an aggregate original principal amount of $7,500,000 for an aggregate purchase price of $6,000,000, which subsequent purchase will occur simultaneously with the consummation of the merger and with effect as of immediately prior to the consummation of the merger.

Pursuant to the Kingdon NPA, Jaguar must issue 10,810,811 shares of Jaguar common stock to the holders of the Kingdon Notes upon conversion of the $10,000,000 aggregate principal amount of Kingdon Notes.

Required Vote of Stockholders

To approve the issuance of shares of Jaguar common stock upon conversion of the Kingdon Notes (this Proposal 2), the affirmative vote of the holders of a majority of shares of Jaguar common stock, present in person or by remote communication, if applicable, or represented by proxy at the special meeting, voting together as a single class and entitled to vote, is required. Although failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares will not affect the outcome of the vote on this proposal, the failure to submit a proxy or vote in person at the special meeting will make it more difficult to meet the requirement under Jaguar's bylaws that the holders of a majority of the Jaguar capital stock issued and outstanding and entitled to vote at the special meeting be present in person or by proxy to constitute a quorum at the special meeting.

Recommendation of the Jaguar Board

THE JAGUAR BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE APPROVAL OF THE ISSUANCE OF SHARES OF JAGUAR COMMON STOCK COMMON STOCK UPON CONVERSION OF THE KINGDON NOTES.

Jaguar Proposal 3: Approval of the Issuance of Shares of Jaguar Common Stock to Invesco

At the Jaguar special meeting, holders of Jaguar common stock will be asked to approve the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to Invesco, pursuant to the Commitment Letter, dated February 21, 2017, between Jaguar and Invesco (sometimes referred to herein as the Invesco Commitment Letter). Holders of Jaguar common stock should read this joint proxy statement/prospectus carefully and in its entirety, including the annexes, for more detailed information concerning the merger agreement and merger.

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Background of the Stock Issuance to Invesco

Prior to Jaguar's entry into the merger agreement, Invesco, an existing Napo stockholder, delivered the signed Invesco Commitment Letter to Jaguar, pursuant to which Invesco agreed, subject to the terms and conditions of such agreement, to purchase, simultaneously with the consummation of the merger, $3.0 million of Jaguar common stock at a price equal to $0.925 per share. Jaguar will loan Napo the $3.0 million in proceeds to partially facilitate the extinguishment of the debt that Napo owes to Nantucket.

Required Vote of Stockholders

To approve the issuance of Jaguar common stock to Invesco (this Proposal 3), the affirmative vote of the holders of a majority of shares of Jaguar common stock, present in person or by remote communication, if applicable, or represented by proxy at the special meeting, voting together as a single class and entitled to vote, is required. Although failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares will not affect the outcome of the vote on this proposal, the failure to submit a proxy or vote in person at the special meeting will make it more difficult to meet the requirement under Jaguar's bylaws that the holders of a majority of the Jaguar capital stock issued and outstanding and entitled to vote at the special meeting be present in person or by proxy to constitute a quorum at the special meeting.

Recommendation of the Jaguar Board

THE JAGUAR BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE APPROVAL OF THE ISSUANCE OF SHARES OF JAGUAR COMMON STOCK COMMON STOCK TO INVESCO PURSUANT TO THE INVESCO COMMITMENT LETTER.

Jaguar Proposal 4: Approval of the Issuance of Shares of Jaguar Common Stock upon Conversion of the CVP Note

At the Jaguar special meeting, holders of Jaguar common stock will be asked to approve the issuance of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, to be issued by Jaguar to certain investors in the original principal amount of up to $2,155,000.

Background of the CVP Note

On June 29, 2017, Jaguar entered into a definitive agreement (sometimes referred to herein as the CVP Agreement) with Chicago Venture Partners, L.P. (sometimes referred to herein as CVP) for the issuance of a convertible promissory note due August 2, 2018 in the original principal amount of $2,155,000 (sometimes referred to herein as the CVP Note) at a purchase price of $1,700,000. The noteholder may convert the CVP Note into shares of Jaguar common stock at a conversion price of $1.00 per share at any time after the earlier of (i) the CVP Note Purchase Price Date and (ii) the Resale S-1 Effective Date. In addition, beginning on the earlier of (i) the Resale S-1 Effective Date and (ii) the CVP Note Purchase Price Date, CVP will have the right to redeem a portion of the outstanding balance of the CVP Note in any amount up to $350,000 per month. If redemption is made prior to the six-month anniversary of the CVP Note Purchase Price Date, the redemption must be satisfied in Jaguar stock. After the six-month anniversary of the CVP Note Purchase Price Date, the redemption(s) may be satisfied in cash or stock, as the election of Jaguar; provided, however, that if Jaguar stock is trading below $1.15 per share, the redemption must be in cash. CVP cannot redeem more than $350,000 per month. Jaguar plans to use $1.0 million of the cash proceeds from the issuance of the CVP Note to prepay principal on its term loan. In addition, CVP will have the right to purchase 100% of the debt under Jaguar's term loan so long as the purchase includes the full pay-out of funds

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owed to the lender under the term loan at such time. Effective upon CVP's purchase of such debt or upon such time that such debt is otherwise repaid in full, CVP will receive a security interest in substantially all of Jaguar's assets.

Required Vote of Stockholders

To approve the issuance of shares of Jaguar common stock upon conversion of the CVP Note (this Proposal 4), the affirmative vote of the holders of a majority of shares of Jaguar common stock, present in person or by remote communication, if applicable, or represented by proxy at the special meeting, voting together as a single class and entitled to vote, is required. Although failure to submit a proxy or vote in person at the special meeting, or a failure to provide your broker, nominee, fiduciary or other custodian, as applicable, with instructions on how to vote your shares will not affect the outcome of the vote on this proposal, the failure to submit a proxy or vote in person at the special meeting will make it more difficult to meet the requirement under Jaguar's bylaws that the holders of a majority of the Jaguar capital stock issued and outstanding and entitled to vote at the special meeting be present in person or by proxy to constitute a quorum at the special meeting.

Recommendation of the Jaguar Board

THE JAGUAR BOARD UNANIMOUSLY RECOMMENDS A VOTE "FOR" THE APPROVAL OF THE ISSUANCE OF SHARES OF JAGUAR COMMON STOCK COMMON STOCK UPON CONVERSION OF THE CVP NOTE.

Jaguar Proposal 5: Approval of the Amended 2014 Stock Incentive Plan

On March 28, 2017, the Jaguar Board of Directors unanimously approved the amendment of the 2014 Plan, subject to approval by the stockholders to increase the number of shares of common stock authorized for issuance under the 2014 Plan by 6,500,188 shares.

The Jaguar Board of Directors has directed that the proposal to amend the 2014 Plan be submitted to the stockholders for their approval at Jaguar's annual meeting. Under the merger agreement, Jaguar will assume (i) each outstanding and unexercised option to purchase Napo common stock, which will be converted into options to purchase Jaguar common stock, (ii) each outstanding warrant to purchase Napo common stock, which will be converted into warrants to purchase Jaguar common stock, and (iii) each outstanding restricted stock unit ("RSU") to acquire Napo common stock, which will be converted into RSUs to acquire Jaguar common stock. Currently, Jaguar does not have a sufficient number of shares authorized for issuance under the 2014 Plan to cover the conversion of these Napo securities. Therefore, Jaguar must amend the 2014 Plan to authorize the issuance of additional shares so that Jaguar can meet its obligations to holders of the Napo options, warrants and RSUs under the merger agreement.

In addition, the Jaguar Board of Directors believes that Jaguar's interests and the interests of Jaguar stockholders will be advanced if Jaguar can continue to offer Jaguar's employees, notably at the senior management level, advisors, consultants, and non-employee directors the opportunity to acquire or increase their proprietary interests in Jaguar. The Jaguar Board of Directors has concluded that Jaguar's ability to attract, retain and motivate top quality management and employees is material to Jaguar's success and would be enhanced by Jaguar's continued ability to grant equity compensation under the 2014 Plan. Accordingly, the Jaguar Board of Directors has determined that the number of shares available for issuance under the 2014 Plan should be increased so that Jaguar may continue its compensation structure and strategy and succession planning process.

When adopted, a total of 333,333 shares of common stock were allocated to the 2014 Plan. Since its adoption, additional shares of common stock have been allocated to the 2014 Plan. Effective January 1, 2016, 162,498 shares were added to the 2014 Plan share pool under the 2014 Plan's

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automatic annual share pool increase. On April 1, 2016, Jaguar's board of directors approved, subject to shareholder approval, an amendment to the 2014 Plan that increased the number of shares available for issuance under the 2014 Plan by 1,550,000 shares. Jaguar's shareholders approved this increase in the number of shares on June 14, 2016. On January 1, 2017, 280,142 shares were added to the 2014 Plan share pool under the automatic annual share pool increase. The automatic annual share pool increase is equal to 2% of the total number of shares of common stock outstanding on December 31 of the preceding calendar year.

Under the 2014 Plan, stock awards are outstanding for a total of 1,963,273 shares that have been granted to 33 employees and directors. Thus, the total number of shares currently available for issuance under the 2014 Plan as of March 31, 2017 is 362,700 shares, not including the 6,500,188 share increase that is the subject of this Proposal 5. If stockholders approve this Proposal 5, the total number of shares available for future stock awards under the 2014 Plan will be 6,862,888. Of the total number of shares allocated to the 2014 Plan, including the 6,500,188 share increase that is the subject of this Proposal 5, the maximum aggregate number of shares that may be issued pursuant to the exercise of incentive stock options within the meaning of Section 422(b) of the Internal Revenue Code of 1986, as amended, or the Code, shall not exceed 8,826,161 shares. Based on current forecasts and estimated stock award grant rates, if the increase is not approved, it is anticipated that the 2014 Plan could run out of available shares as soon as August 31, 2017.

Stockholder approval of the amendment of the 2014 Plan is being sought (i) so that compensation attributable to grants under the 2014 Plan may continue to qualify for an exemption from the $1 million deduction limit under section 162(m) of the Code, (ii) in order for incentive stock options to meet the requirements of the Code, and (iii) in order to meet the Nasdaq Global Market listing requirements. If the stockholders do not approve the amendment and restatement of the 2014 Plan at the Annual Meeting, the amendment of the 2014 Plan will not become effective, and the number of shares authorized for issuance under the 2014 Plan will not be increased by 6,500,188 shares.

For information with respect to grants to certain executive officers in Fiscal Year 2016 under the 2014 Plan, see page 245 and for information with respect to grants to Jaguar's non-employee directors, see page 248.

The material terms of the proposed amendment of the 2014 Plan are summarized below. This summary of the 2014 Plan is not intended to be a complete description of the 2014 Plan. This summary is qualified in its entirety by the actual text of the 2014 Plan to which reference is made. A copy of the 2014 Plan is attached as Exhibit 10.1 to Jaguar's Current Report on Form 8-K (No. 001-36714) filed with the Securities and Exchange Commission on June 20, 2016.

Material Terms of the 2014 Plan

In July 2014, our Board of Directors adopted the 2014 Plan, and in July 2014, our stockholders approved the 2014 Plan. The 2014 Plan became effective in May 2015. The 2014 Plan provides for the grant of incentive stock options to our eligible employees, and for the grant of nonstatutory stock options, restricted stock, and RSUs to eligible employees, directors and consultants.

Authorized Shares. We originally approved 333,333 shares of our common stock for issuance pursuant to the 2014 Plan. On April 1, 2016, we unanimously approved the amendment of the 2014 Plan, subject to approval by the stockholders, to increase the number of shares of our common stock authorized for issuance under the 2014 Plan by 1,550,000 shares from 333,333 to 1,883,333.

On January 1st of each year, for a period of not more than five years, beginning on January 1, 2016 and ending no later than January 1, 2019, the number of shares allocated to the 2014 Plan automatically increases in an amount equal to 2% of the total number of shares of common stock outstanding on December 31st of the preceding calendar year. The Board of Directors may act prior to

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January 1st of any given year, at its discretion, to provide for no increase in shares or to add a lesser number of shares than provided for in the prior sentence. On January 1, 2016, a total of 162,498 shares were added to the 2014 Plan share pool under the automatic annual share pool increase. On January 1, 2017, a total of 280,142 shares were added to the 2014 Plan share pool under the automatic annual share pool increase.

If a stock award expires without having been exercised in full, or, with respect to restricted stock and RSUs, a stock award is forfeited, the shares that were subject to those stock awards will become available for future grant or sale under the 2014 Plan (unless the 2014 Plan has terminated). If unvested shares of restricted stock or RSUs are repurchased by the company or are forfeited to the company, such shares will become available for future awards under the 2014 Plan.

Plan Administration. The 2014 Plan is administered by the compensation committee of our board of directors, or the committee, or our Board of Directors, acting as the committee. In the case of awards intended to qualify as "performance-based compensation" within the meaning of Section 162(m) of the Code, the committee will consist of two or more "outside directors" within the meaning of Section 162(m) of the Code. In addition, if we determine it is desirable to qualify transactions under the 2014 Plan as exempt under Rule 16b-3, such transactions will be structured to satisfy the requirements for exemption under Rule 16b-3. Subject to the provisions of the 2014 Plan, the committee has the power to administer the 2014 Plan, including but not limited to, the power to interpret the terms of the 2014 Plan and stock awards granted under it, to create, amend and revoke rules relating to the 2014 Plan, including creating sub-plans, and to determine the terms of the awards, including the exercise price, the number of shares subject to each such award, the exercisability of the awards and the form of consideration, if any, payable upon exercise. The 2014 Plan limits the aggregate amount of stock awards granted under the 2014 Plan to 233,333 shares to any one participant in a fiscal year (300,000 in the first year of employment).

Options. Both incentive stock options qualifying under Section 422 of the Code and non-statutory stock options may be granted under the 2014 Plan. Of the total number of shares allocated to the 2014 Plan, the maximum aggregate number of shares that may be issued pursuant to the exercise of incentive stock options shall not exceed 2,325,973 shares. The exercise price of options granted under the 2014 Plan must at least be equal to the fair market value of the common stock on the date of grant. The term of an incentive stock option may not exceed ten years, except that with respect to any participant who owns more than 10% of the voting power of all classes of our outstanding stock, the term must not exceed five years and the exercise price must equal at least 110% of the fair market value on the grant date. For nonstatutory stock options the exercise price must equal at least 100% of the fair market value. The committee will determine the methods of payment of the exercise price of an option, which may include cash, shares or other property acceptable to the committee, as well as other types of consideration permitted by applicable law. After the termination of service of an employee, director or consultant, he or she may exercise the vested portion of his or her option for the period of time stated in his or her award agreement, except in the case of an employee terminated for cause (as defined in the 2014 Plan) the option will terminate upon his or her termination from service. Generally, if termination is due to death or disability, the vested portion of the option will remain exercisable for 12 months. In all other cases, the vested portion of the option generally will remain exercisable for three months following the termination of service. An option may not be exercised after expiration of its term. However, if the exercise of an option is prevented by applicable law the exercise period may be extended under certain circumstances. Subject to the provisions of the 2014 Plan, the committee determines the other terms of options.

Restricted Stock. Restricted stock awards may be granted under the 2014 Plan. Restricted stock awards are grants of shares of our common stock that vest in accordance with terms and conditions established by the committee. The committee will determine the number of shares of restricted stock

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granted to any employee, director or consultant and, subject to the provisions of the 2014 Plan, will determine the terms and conditions of such awards. The committee may impose whatever conditions to vesting it determines to be appropriate (for example, the committee may set restrictions based on the achievement of specific performance goals or continued service to us); provided, however, that the committee, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted stock awards generally will have voting and dividend rights with respect to such shares upon grant without regard to vesting, unless the committee provides otherwise. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

RSUs. Awards of RSUs may be granted under the 2014 Plan. An RSU is the right to receive a share of common stock at a future date. The committee determines the terms and conditions of RSUs, including the vesting criteria (which may include accomplishing specified performance criteria or continued service to us) and the form and timing of payment. Notwithstanding the foregoing, the committee, in its sole discretion, may accelerate the time at which RSUs will vest.

Non-Transferability of Awards. Unless the committee provides otherwise, stock awards issued under the 2014 Plan are not transferrable other than by will or the laws of descent and distribution, and only the recipient of an award may exercise an award during his or her lifetime, although a recipient may designate a beneficiary to exercise an award after death.

Certain Adjustments. In the event of certain changes in the capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under the 2014 Plan, the committee will adjust the number and class of shares that may be delivered under the 2014 Plan and/or the number, class and price of shares covered by each outstanding award, and the numerical share limits set forth in the 2014 Plan. In the event of the proposed liquidation or dissolution, the committee will notify participants as soon as practicable and all awards will terminate immediately prior to the consummation of such proposed transaction.

Merger or Change in Control. The 2014 Plan provides that in the event of a merger or change in control, as defined under the 2014 Plan, each outstanding award will be treated as the committee determines, including (i) the assumption, continuation or substitution of the stock awards by the successor corporation or its parent or subsidiary, (ii) the acceleration of vesting for any unvested portion of the stock awards, or (iii) the cash-out of the stock awards.

Amendment; Termination. The Board of Directors has the authority to amend, suspend or terminate the 2014 Plan provided such action does not impair the existing rights of any participant.

Required Vote of Stockholders

To approve the amendment of the 2014 Plan (this Proposal 5), the affirmative vote of the holders of a majority of shares of Jaguar common stock, present in person or by remote communication, if applicable, or represented by proxy at the annual meeting, voting together as a single class and entitled to vote, is required. Because approval is based on the affirmative vote of a majority of the outstanding shares of Jaguar common stock entitled to vote, a Jaguar stockholder's failure to vote in person or by proxy at the annual meeting, or an abstention from voting, or the failure of a holder of Jaguar common stock who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote "**AGAINST**" adoption of this proposal.

Recommendation of the Jaguar Board

THE JAGUAR BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE AMENDMENT OF THE 2014 PLAN.

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Jaguar Proposal 6: Adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to Increase the Number of Authorized Shares of Common Stock

At the Jaguar special meeting, holders of Jaguar common stock will be asked to adopt Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc." Holders of Jaguar common stock should read this joint proxy statement/prospectus carefully and in its entirety, including the annexes, for more detailed information concerning the merger agreement and merger. A copy of Jaguar's Third Amended and Restated Certificate of Incorporation is attached to this joint proxy statement/prospectus as *Annex B*.

Required Vote of Stockholders

The adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc." (this Proposal 6) is one of the conditions to the consummation of the merger. Jaguar estimates that it may issue up to an aggregate of approximately 69,299,346 shares of its common stock and non-voting common stock to Napo Stakeholders as contemplated by the merger agreement. Thus, Jaguar must adopt its Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock.

To approve the increase in the number of authorized shares of common stock and the change to the Jaguar corporate name (this Proposal 6), the affirmative vote of a majority of the outstanding shares of Jaguar common stock, voting together as a single class and entitled to vote, is required for such proposal. Because approval is based on the affirmative vote of a majority of the outstanding shares of Jaguar common stock entitled to vote, a Jaguar stockholder's failure to vote in person or by proxy at the special meeting, or an abstention from voting, or the failure of a holder of Jaguar common stock who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote "**AGAINST**" adoption of this proposal.

Recommendation of the Jaguar Board

THE JAGUAR BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE ADOPTION OF JAGUAR'S THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION TO INCREASE THE NUMBER OF AUTHORIZED SHARES OF COMMON STOCK AND CHANGE THE JAGUAR CORPORATE NAME TO "JAGUAR HEALTH, INC."

THE MERGER IS CONDITIONED ON APPROVAL OF THIS PROPOSAL.

Jaguar Proposal 7: Adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to Authorize a Class of Non-Voting Common Stock

At the Jaguar special meeting, holders of Jaguar common stock will be asked to adopt Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock. Holders of Jaguar common stock should read this joint proxy statement/prospectus carefully and in its entirety, including the annexes, for more detailed information concerning the merger agreement and merger. A copy of Jaguar's Third Amended and Restated Certificate of Incorporation is attached to this joint proxy statement/prospectus as *Annex B*.

Required Vote of Stockholders

The adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock (this Proposal 7) is one of the conditions to the consummation of the

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merger. The merger consideration consists of common stock and non-voting common stock; thus, Jaguar must adopt its Third Amended and Restated Certificate of Incorporation to create this class of non-voting common stock. Shares of Jaguar non-voting common stock are the same in all respects to shares of Jaguar's common stock except that holders of shares of non-voting common stock are not entitled to vote on matters submitted to Jaguar stockholders (other than in connection with a change of control of Jaguar), and shares of non-voting common stock are convertible into shares of common stock on a one-for-one basis (i) at the option of the respective holders thereof, at any time and from time to time on or after April 1, 2018 or (ii) automatically, without any payment of additional consideration by the holder thereof, (x) upon a transfer of such shares to any person or entity that is neither an affiliate of Nantucket nor an investment fund, investment vehicle or other account, that is, directly or indirectly, managed or advised by Nantucket or any of its affiliates pursuant to a sale of such stock to a third-party for cash in accordance with the terms and condition set forth in the Investor Rights Agreement, or (y) upon the release or transfer of such shares to the registered holders of Napo's outstanding shares of common stock immediately prior to the consummation of the merger (such shareholders sometimes referred to herein as the Napo Legacy Stockholders).

To approve the authorization of a class of non-voting common stock (this Proposal 7), the affirmative vote of a majority of the outstanding shares of Jaguar common stock, voting together as a single class and entitled to vote, is required for such proposal. Because approval is based on the affirmative vote of a majority of the outstanding shares of Jaguar common stock entitled to vote, a Jaguar stockholder's failure to vote in person or by proxy at the special meeting, or an abstention from voting, or the failure of a holder of Jaguar common stock who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote "**AGAINST**" adoption of this proposal.

Recommendation of the Jaguar Board

THE JAGUAR BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE ADOPTION OF JAGUAR'S THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION TO CREATE A CLASS OF NON-VOTING COMMON STOCK.

THE MERGER IS CONDITIONED ON APPROVAL OF THIS PROPOSAL.

Jaguar Proposal 8: Adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to Require Nantucket's Prior Written Consent Before the Issuance of Dividends to Holders of Jaguar Common Stock and/or Non-Voting Common Stock

At the Jaguar special meeting, holders of Jaguar common stock will be asked to adopt Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock. Holders of Jaguar common stock should read this joint proxy statement/prospectus carefully and in its entirety, including the annexes, for more detailed information concerning the merger agreement and merger. A copy of Jaguar's Third Amended and Restated Certificate of Incorporation is attached to this joint proxy statement/prospectus as *Annex B*.

Required Vote of Stockholders

The adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock for so long as Nantucket or its affiliates own any shares of Jaguar non-voting common stock (this Proposal 8) is one of the conditions to the consummation of the merger. In connection with the execution of the merger agreement and the Nantucket Settlement

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Agreement, Jaguar and Nantucket entered into the Investor Rights Agreement, which provides, among other things, that Jaguar cannot pay any dividends on any shares of its capital stock or redeem any shares, except in limited circumstances, without the prior written consent of Nantucket. Thus, Jaguar must adopt its Third Amended and Restated Certificate of Incorporation to restrict the issuance of dividends without the prior written consent of Nantucket.

To approve the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock (this Proposal 8), the affirmative vote of a majority of the outstanding shares of Jaguar common stock, voting together as a single class and entitled to vote, is required for such proposal. Because approval is based on the affirmative vote of a majority of the outstanding shares of Jaguar common stock entitled to vote, a Jaguar stockholder's failure to vote in person or by proxy at the special meeting, or an abstention from voting, or the failure of a holder of Jaguar common stock who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote "**AGAINST**" adoption of this proposal.

Recommendation of the Jaguar Board

THE JAGUAR BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE ADOPTION OF JAGUAR'S THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION TO REQUIRE NANTUCKET'S PRIOR WRITTEN CONSENT BEFORE THE ISSUANCE OF DIVIDENDS TO HOLDERS OF JAGUAR COMMON STOCK AND/OR NON-VOTING COMMON STOCK.

THE MERGER IS CONDITIONED ON APPROVAL OF THIS PROPOSAL.

Jaguar Proposal 9: Approval to Adjourn the Special Meeting if Necessary or Advisable to Permit Further Solicitation of Proxies in the Event There are Not Sufficient Votes at the Time of the Special Meeting to Approve the Jaguar Proposals

At the Jaguar special meeting, holders of Jaguar common stock will be asked to approve the adjournment of the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to approve (i) the issuance of shares described in Proposals 1 through 4, (ii) the amendment of the 2014 Plan described in Proposal 5, and/or (iii) the amendments to Jaguar's Third Amended and Restated Certificate of Incorporation described in Proposals 6 through 8.

Required Vote of Stockholders

To approve the adjournment of the special meeting, if necessary or advisable to solicit additional proxies if there are not sufficient votes to approve (i) the issuance of shares described in Proposals 1 through 4, (ii) the amendment of the 2014 Plan described in Proposal 5, and/or (iii) the amendments to Jaguar's Third Amended and Restated Certificate of Incorporation described in Proposals 6 through 8 (this Proposal 9), the affirmative vote of the holders of a majority of shares of Jaguar common stock, if a quorum is present, is required. The chairman of the meeting may also (regardless of the outcome of the stockholder vote on adjournment) adjourn the meeting to another place, date and time. If a quorum is not present, a majority of the voting stock represented in person or by proxy, or the chairman of the meeting, may adjourn the meeting until a quorum is present. Shares held by stockholders who are not present at the special meeting in person or by proxy will have no effect on the outcome of any vote to adjourn the special meeting. Broker non-votes and abstentions will have no effect on the outcome of any vote to adjourn the special meeting if a quorum is present but will have the same effect as a vote "**AGAINST**" if no quorum is present.

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Recommendation of the Jaguar Board

THE JAGUAR BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE APPROVAL TO ADJOURN THE SPECIAL MEETING IF NECESSARY OR ADVISABLE TO PERMIT FURTHER SOLICITATION OF PROXIES IN THE EVENT THERE ARE NOT SUFFICIENT VOTES AT THE TIME OF THE SPECIAL MEETING TO APPROVE (I) THE ISSUANCE OF SHARES DESCRIBED IN PROPOSALS 1 THROUGH 4, (II) THE AMENDMENT OF THE 2014 PLAN DESCRIBED IN PROPOSAL 5, AND/OR (III) THE AMENDMENTS TO JAGUAR'S THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION DESCRIBED IN PROPOSALS 6 THROUGH 8.

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SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE OF JAGUAR

Section 16(a) of the Exchange Act, and regulations of the SEC thereunder require Jaguar's directors, officers and persons who own more than 10% of Jaguar's common stock, as well as certain affiliates of such persons, to file initial reports of their ownership of Jaguar's common stock and subsequent reports of changes in such ownership with the SEC. Directors, officers and persons owning more than 10% of Jaguar's common stock are required by SEC regulations to furnish Jaguar with copies of all Section 16(a) reports they file. Based solely on Jaguar's review of the copies of such reports and amendments thereto received by Jaguar and written representations from these persons that no other reports were required, Jaguar believes that during the fiscal year ended December 31, 2017, Jaguar's directors, officers and owners of more than 10% of Jaguar's common stock complied with all applicable filing requirements.

EQUITY COMPENSATION PLAN INFORMATION OF JAGUAR

The following table provides information about Jaguar common stock that may be issued upon the exercise of options, warrants and rights under all of Jaguar's existing equity compensation plans as of December 31, 2016.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Restricted Stock, and RSUs	Weighted-Average Exercise Price of Outstanding Options, Restricted Stock, and RSUs	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans(1)
Equity Compensation Plans Approved by Security Holders:			
2013 Equity Incentive Plan(1)	565,377	$ 3.64	
2014 Stock Incentive Plan	2,005,843	$ 2.20	39,988

(1) Jaguar's 2013 Equity Incentive Plan was terminated in May 2015 in connection with Jaguar's initial public offering and replaced by the 2014 Stock Plan, although the 2013 Equity Incentive Plan continues to govern the administration of awards made prior to its replacement by the 2014 Stock Incentive Plan.

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COMPENSATION OF DIRECTORS AND EXECUTIVE OFFICERS OF JAGUAR

Summary Compensation Table

The total compensation paid to Jaguar's principal executive officer and its three highest compensated executive officers other than the principal executive officer, respectively, for services rendered in 2016, 2015 and 2014, as applicable, is summarized as follows:

	Year	Salary ($)	Bonus ($)	Severance ($)	Option awards ($)(1)	Stock awards ($)(2)	All other compensation ($)(3)	Total ($)
Lisa A. Conte	2016	446,205			435,493		14,923	896,622
President and Chief	2015	421,539	45,000				12,001	478,540
Executive Officer	2014	330,769			236,797	86,071	10,055	663,692
Steven R. King, Ph.D.	2016	284,456			84,584		29,241	398,281
Executive Vice President,	2015	268,731	19,125				26,568	314,424
Sustainable Supply, Ethnobotanical Research and Intellectual Property	2014	210,865			160,383	50,208	18,226	439,682
Karen S. Wright	2016	243,385			68,863			312,248
Chief Financial Officer and Treasurer(4)	2015	32,308			18,126			50,434
	2014							
John A. Kallassy	2016	93,664		71,625			13,828	179,117
Chief Operating Officer,	2015	265,808	24,836		45,100	7,666	26,568	369,978
Former Chief Financial Officer and Former Treasurer(5)	2014	181,731			118,398	43,035	19,207	362,371
Roger Waltzman	2016	165,000	10,000		95,730			270,730
Chief Scientific Officer(6)	2015							
	2014							

Footnotes to Summary Compensation Table

(1) Represents the dollar amounts recognized for financial statement reporting purposes with respect to the fiscal year (for stock option awards) determined under FASB ASC Topic 718 using assumptions set forth in the footnotes to the financial statements in the Annual Report on Form 10-K for the years ended 2016 and 2015. The following are the options held by each executive officer as of December 31, 2016:

a. Ms. Conte an aggregate of 764,179 shares were granted as follows: 16,998 shares granted December 19, 2016, 318,000 shares granted September 22, 2016, 69,970 shares granted April 1, 2016 which became effective at the annual stockholders' meeting of June 14, 2016, 113,212 shares granted July 7, 2015 which became effective at the annual stockholders' meeting of June 14, 2016, 85,616 shares granted July 2, 2015 which became effective at the annual stockholders' meeting of June 14, 2016, and 160,383 shares granted April 1, 2014;

b. Dr. King an aggregate of 199,299 shares were granted as follows: 4,496 shares granted December 19, 2016, 23,042 shares granted September 22, 2016, 28,263 shares granted April 1, 2016 which became effective at the annual stockholders' meeting of June 14, 2016, 49,942 shares granted July 2, 2015 which became effective at the annual stockholders' meeting of June 14, 2016, and 93,556 shares granted April 1, 2014;

c. Ms. Wright an aggregate of 130,366 shares were granted as follows: 2,866 shares granted December 19, 2016, 103,698 shares granted September 22, 2016, 3,802 shares granted April 1, 2016 which became effective at the annual stockholders' meeting of June 14, 2016, and 20,000 shares granted November 23, 2015;

d.

Mr. Kallassy 80,191 shares were granted April 1, 2014 and 13,365 shares granted May 13, 2015.

e.

Dr. Waltzman an aggregate of 130,366 shares were granted as follows: 2,866 shares granted December 19, 2016 and 127,500 shares granted August 12, 2016.

All of the April 1, 2014 option grants vested 25% on January 1, 2015 (nine months from grant date), with the remainder vesting equally over the following 27 months such that the options are vested in full on April 1, 2017. Ms. Wright's November 23, 2015 option vested 25% on September 9, 2016, with the remainder vesting equally over the following 27 months such that the option is vested in full on November 9, 2018. All of the July 2, 2015 options were granted contingent upon approval of Jaguar's stockholders at the June 14, 2016 annual stockholders' meeting

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and vest 1/36th per month beginning one month after grant date, with the remainder vesting equally over the following 35 months such that the option is vested in full on July 2, 2018. Ms. Conte's July 7, 2015 option was likewise granted contingent upon approval of Jaguar's stockholders at the June 14, 2016 annual stockholders' meeting and vests 1/36th per month beginning one month after grant date, with the remainder vesting equally over the following 35 months such that the option is vested in full on July 7, 2018. All of the options granted on April 1, 2016 which became effective at the annual stockholders' meeting of June 14, 2016, September 22, 2016 and December 19, 2016 vest 1/36th per month beginning one month after grant, with the remainder vesting equally over the following 35 months such that the option is vested in full on December 19, 2019. Mr. Kallassy's May 13, 2015 option grant vested 25% on June 19, 2015, with the remainder vesting equally over the following 27 months such that the option would have vested in full on September 19, 2017 had Mr. Kallassy not resigned in March 2016. Pursuant to Mr. Kallassy's separation agreement, dated April 28, 2016, all of Mr. Kallassy's stock options that remained unvested as of the date of the separation agreement were immediately accelerated to become fully vested. Mr. Kallassy had 90 days following the date of the separation agreement to exercise such stock options, after which any unexercised options were cancelled. Dr. Waltzman's August 12, 2016 option vested 2/36th on the grant date, with 7/36th vesting on April 1, 2017 and the remainder vesting equally over the following 27 months such that the option would have vested in full on July 1, 2019 had Dr. Waltzman not resigned in April 2017. Dr. Waltzman's stock options that are vested as of the effective date of his resignation, April 3, 2017, must be exercised within 3 months of such resignation or such options are cancelled, pursuant to the Company's 2014 Stock Incentive Plan. Any stock options that are unvested as of the effective date of his resignation are cancelled on such date of resignation.

(2)

Represents the dollar amounts recognized for financial statement reporting purposes with respect to the fiscal year (for restricted stock unit awards) determined under FASB ASC Topic 718 using assumptions set forth in the footnotes to the financial statements of Jaguar included in this joint proxy statement/prospectus. The aggregate number of restricted stock units held by each executive officer at December 31, 2016 and 2015 was as follows: Ms. Conte 8,910 of the 17,820 units granted June 2, 2014; Dr. King 5,198 of the 10,395 units granted June 2, 2014; Mr. Kallassy 0 of the 8,910 units granted June 2, 2014 and 0 of the 1,484 units granted May 13, 2015. All of the restricted stock units vested and were exchanged for shares of common stock on 01/01/2016. The remaining 50% will vest and be issuable on 07/01/2017. Vesting is subject to the Reporting Person's continued employment with Jaguar through the applicable vesting dates. Each restricted stock unit represents the right to receive, at settlement, one (1) share of Jaguar's common stock.

(3)

Amounts shown in this column reflect incremental health insurance premiums paid for such executive's family members. Mr. Kallassy also received $6,954 in income associated with COBRA insurance premiums paid on his behalf in 2016.

(4)

Ms. Wright has served as Chief Financial Officer and Treasurer since December 15, 2015. Compensation includes all earnings since joining the Company on November 9, 2015.

(5)

Mr. Kallassy resigned as Chief Financial Officer and Treasurer on December 15, 2015.

(6)

Dr. Waltzman became the Chief Scientific Officer on July 1, 2016 and resigned on April 3, 2017.

Narrative to Summary Compensation Table

Understanding Jaguar's history is key to the understanding of Jaguar's compensation structure for 2015 and 2016. After Jaguar's initial public offering closed on May 18, 2015, the executive officers of privately-held Jaguar Animal Health, Inc. became Jaguar's named executive officers.

Base Salary

On July 2, 2015, the Compensation Committee increased Ms. Conte's annual base salary from $400,000 to $440,000, Dr. King's annual base salary from $255,000 to $280,500, and Mr. Kallassy's annual base salary from $245,000 to $286,500. The pay increases were effective June 15, 2015. On December 15, 2015, upon receiving the resignation of Mr. Kallassy, Jaguar's Board of Directors appointed Karen S. Wright as Jaguar's new Chief Financial Officer. Ms. Wright's annual base salary is $240,000. Dr. Waltzman's annual base salary is $330,000.

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Bonuses

On July 10, 2015, Jaguar paid discretionary bonuses to Ms. Conte, Dr. King and Mr. Kallassy of $45,000, $19,125 and $17,913, respectively. Jaguar also paid an additional bonus of $6,923 to Mr. Kallassy on February 6, 2015. The amount of each of these bonuses is set forth in the "Bonus" column in the Summary Compensation Table.

Jaguar paid sign-on bonuses to Dr. Waltzman of $10,000 of which $5,000 was paid on September 30, 2016 and $5,000 was paid on October 15, 2016.

Severance

Jaguar paid discretionary severance to Mr. Kallassy of $71,625, of which $23,875 was remitted on May 13, 2016, June 15, 2016 and June 30, 2016, respectively. The amount of severance is set forth in the "Severance" column in the Summary Compensation Table.

Equity Compensation

Ms. Conte, Dr. King and Mr. Kallassy received stock option grants at the time they were hired by privately-held Jaguar Animal Health, Inc. Such options generally vest over time, with 25% of the options vesting after nine months of employment and monthly vesting thereafter with full vesting after three years. Ms. Wright and Dr. Waltzman each received stock option grants with a similar vesting schedule at the time they were hired by Jaguar. Jaguar's board of directors periodically grants additional options to the current named executive officers that typically vest ratably over a three-year period.

Upon Jaguar's initial public offering on May 18, 2015, the named executive officers received RSUs. Fifty percent of the RSUs shares vested and were issued on 01/01/2016, and, subject to the terms of the RSU award, the remaining 50% will vest and be issuable on 07/01/2017.

All stock options and restricted stock units issued to Jaguar's current named executive officers vest and become exercisable upon a change in control.

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Outstanding Equity Awards at 2016 Fiscal Year End

The following table provides information regarding outstanding equity awards held by Jaguar's named executive officers as of December 31, 2016:

	Options Vesting Commencement Date	Number of Securities Underlying Unexercised Options		Option exercise price	Stock Option expiration date	Number of securities underlying unexercised RSUs(10)
		Exercisable	Unexerciseable			
Lisa A. Conte	4/1/2014	142,562	17,821(1)	$ 2.53	4/1/2024	8,910
	7/2/2015	40,429	45,187(4)	$ 5.09	7/2/2025	
	7/7/2015	53,460	59,752(5)	$ 4.84	7/7/2025	
	4/1/2016	15,548	54,422(7)	$ 1.58	4/1/2026	
	9/22/2016	26,500	291,500(8)	$ 1.25	9/22/2026	
	12/19/2016		16,998(9)	$ 0.74	12/19/2026	
Steven R. King, Ph.D.	4/1/2014	83,160	10,396(1)	$ 2.53	4/1/2024	5,198
	7/2/2015	23,583	26,359(4)	$ 5.09	7/2/2025	
	4/1/2016	6,280	21,983(7)	$ 1.58	4/1/2026	
	9/22/2016	1,920	21,122(8)	$ 1.25	9/22/2026	
	12/19/2016		4,496(9)	$ 0.74	12/19/2026	
Karen S. Wright	11/9/2015	7,222	12,778(3)	$ 2.04	11/23/2025	
	4/1/2016	844	2,958(7)	$ 1.58	4/1/2026	
	9/22/2016	8,641	95,057(8)	$ 1.25	9/22/2026	
	12/19/2016		2,866(9)	$ 0.74	12/19/2026	
John A. Kallassy	4/1/2014	44,549	35,642(1)	$ 2.53	4/1/2024	
	9/19/2014	5,567	13,365(2)	$ 7.00	5/13/2025	
Roger Waltzman	7/1/2016	7,083	120,417(6)	$ 1.47	8/12/2026	
	12/19/2016		2,866(9)	$ 0.74	12/19/2026	

(1) On January 1, 2015, 25% of each of such named executive officer's shares vested and became exercisable. The remainder of the shares vested in approximately equal monthly installments through April 1, 2017, subject to continued service with Jaguar through each relevant vesting date.

(2) The shares were granted on May 18, 2015. On December 19, 2014, 1/12th of the options were retroactively vested and became exercisable, with the remainder of the shares vesting in equal monthly installments such that they would have vested in full on September 19, 2017 had Mr. Kallassy not resigned in March 2016.

(3) The shares were granted on November 23, 2015. On August 9, 2016, 25% of such named executive officer's shares vested and became exercisable. The remainder of the shares is scheduled to vest in approximately equal monthly installments through November 9, 2018, subject to continued service with Jaguar through each relevant vesting date.

(4) The shares were granted on July 2, 2015 contingent upon the approval of Jaguar's stockholders at the June 14, 2016 annual stockholders' meeting and vest 1/36th per month beginning one month after grant date, with the remainder vesting equally over the following 35 months such that the option is vested in full on July 2, 2018, subject to continued, subject to continued service with Jaguar through each relevant vesting date.

(5) The shares were granted on July 7, 2015 contingent upon the approval of Jaguar's stockholders at the June 14, 2016 annual stockholders' meeting and vest 1/36th per month beginning one month after grant date, with the remainder vesting equally over the following 35 months such that the option is vested in full on July 7, 2018, subject to continued service with Jaguar through each relevant vesting date.

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(6) The shares were granted on August 12, 2016 and vest 2/36th on the grant date, 7/36th vested on April 1, 2017 with the remainder vesting equally over the following 27 months such that the option would have vested in full on July 1, 2019 had Dr. Waltzman not resigned in April 2017.

(7) The options were granted on April 1, 2016, which became effective at the annual stockholders' meeting of June 14, 2016, and vest 1/36th per month beginning one month after grant, with the remainder vesting equally over the following 35 months such that the option is vested in full on April 1, 2019, subject to continued service with Jaguar through each relevant vesting date.

(8) The options were granted on September 22, 2016 and vest 1/36th per month beginning one month after grant, with the remainder vesting equally over the following 35 months such that the option is vested in full on September 22, 2019, subject to continued service with Jaguar through each relevant vesting date.

(9) The options were granted on December 19, 2016 and vest 1/36th per month beginning one month after grant, with the remainder vesting equally over the following 35 months such that the option is vested in full on December 19, 2019, subject to continued service with Jaguar through each relevant vesting date.

(10) 50% of the shares of common stock underlying the RSUs vested and became issuable on January 1, 2016, and assuming compliance with the terms of the RSU award agreement, the remaining 50% of the shares of common stock underlying the RSUs will vest and be issuable on July 1, 2017.

Executive Employment Agreements

Lisa A. Conte

In March 2014, Jaguar entered into an offer letter with Ms. Conte to serve as Jaguar's Chief Executive Officer, effective March 1, 2014, in an at-will capacity. Under this offer letter, Ms. Conte's annual base salary is $400,000, and she is eligible for an annual target bonus of 30% of her base salary. Effective June 15, 2015, Jaguar's board of directors has reviewed the terms of Ms. Conte's employment arrangement in connection with its annual compensation review, and has adjusted Ms. Conte's base salary to $440,000. Ms. Conte is entitled to participate in all employee benefit plans, including group health care plans and all fringe benefit plans.

In April 2014, Ms. Conte was granted a stock option to purchase 160,383 shares of common stock at an exercise price of $2.54 per share. The option has a 10-year term and vests as follows: 25% vested on January 1, 2015, 9 months after the grant date, with the remainder vesting equally over the next 27 months such that the option was vested in full on April 1, 2017. On June 2, 2014, Ms. Conte was granted 17,820 restricted stock units, or RSUs. Fifty percent of the shares of common stock underlying the RSUs vested and were issued on January 1, 2016, and the remaining 50% will vest and be issuable on July 1, 2017 pursuant to the terms of the RSU agreement. In the event of a change in control, as defined in the Jaguar Animal Health, Inc. 2013 Equity Incentive Plan, or the 2013 Plan, the vesting of all outstanding awards granted to Ms. Conte under the 2013 Plan will accelerate if Ms. Conte's service with Jaguar is terminated without cause within twelve months of the change in control.

Steven R. King, Ph.D.

In February 2014, Jaguar entered into an offer letter with Dr. King to serve as Jaguar's Executive Vice President, Sustainable Supply, Ethnobotanical Research and Intellectual Property, effective March 1, 2014, in an at-will capacity. Under the offer letter, Dr. King's annual base salary of $255,000, he is eligible for an annual target bonus of 30% of his base salary, and he is eligible to participate in the employee benefit plans Jaguar offers to its other employees. Effective June 15, 2015, Jaguar's board of directors has reviewed the terms of Dr. King's employment arrangement in connection with its

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annual compensation review, and has adjusted Dr. King's base salary to $280,500. Dr. King is entitled to participate in all employee benefit plans, including group health care plans and all fringe benefit plans.

In April 2014, Dr. King was granted a stock option to purchase 93,556 shares of common stock at an exercise price of $2.54 per share. The option has a 10-year term and vests as follows: 25% vested on January 1, 2015, 9 months after the grant date, with the remainder vesting equally over the next 27 months such that the option was vested in full on April 1, 2017. In June 2014, Dr. King was granted 10,395 RSUs. Fifty percent of the shares of common stock underlying the RSUs vested and were issued on January 1, 2016, and the remaining 50% will vest and be issuable on July 1, 2017 pursuant to the terms of the RSU agreement. In the event of a change in control, as defined in the 2013 Plan, the vesting of all outstanding awards granted to Dr. King under the 2013 Plan will accelerate if Dr. King's service with us is terminated without cause within twelve months of the change in control.

John A. Kallassy

In January 2014, Jaguar entered into an offer letter with Mr. Kallassy to serve as Jaguar's Executive Vice President and Chief Operating Officer, effective as upon the closing of Jaguar's first sale of Series A preferred stock on February 5, 2014. Effective as of September 19, 2014, Jaguar entered into a new offer letter with Mr. Kallassy in connection with his appointment to serve as Jaguar's Chief Financial Officer. Under the current offer letter, Mr. Kallassy's annual base salary is $245,000, and he is eligible for an annual target bonus of 30% of his base salary and is eligible to participate in the employee benefit plans that Jaguar offers to its other employees. Effective June 15, 2015, Jaguar's board of directors has reviewed the terms of Mr. Kallassy's employment arrangement in connection with its annual compensation review, and has adjusted Mr. Kallassy's base salary to $286,500 and his target bonus was increased to 35% of his base salary. Mr. Kallassy is entitled to participate in all employee benefit plans, including group health care plans and all fringe benefit plans.

In April 2014, Mr. Kallassy was granted a stock option to purchase 80,191 shares of common stock at an exercise price of $2.54 per share. The option has a 10-year term and vests as follows: 25% vested on January 1, 2015, 9 months after the grant date, with the remainder vesting equally over the next 27 months such that the option would have vested in full on April 1, 2017 had Mr. Kallassy not resigned in March 2016. Pursuant to Mr. Kallassy's separation agreement, dated April 28, 2016, all of Mr. Kallassy's stock options that remained unvested as of the date of the separation agreement were immediately accelerated to become fully vested. Mr. Kallassy had 90 days following the date of the separation agreement to exercise such stock options. In June 2014, Mr. Kallassy was granted 8,910 RSUs and in February 2015, Mr. Kallassy was granted 1,484 RSUs. Fifty percent of the shares of common stock underlying the RSUs vested and were issued on January 1, 2016, and the remaining 50% would have vested and become issuable on July 1, 2017 pursuant to the terms of the RSU agreement had Mr. Kallassy not resigned in March 2016. Jaguar also agreed that Mr. Kallassy was eligible for the grant of an additional 1,484 RSUs, as well as an option to purchase an additional 13,365 shares of common stock, subject to approval by Jaguar's board of directors. Accordingly, in February 2015, Jaguar's board of directors granted Mr. Kallassy the additional 1,484 RSUs (which have the same terms as those granted in June 2014), and granted an option to purchase 13,365 shares of common stock at an exercise price equal to $7.00, which was the initial public offering price of Jaguar's common stock. This option had a 10-year term and vested as follows: 1/12 vested 3-months after the grant date, with the remainder vesting in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date, subject to continued service with Jaguar through each relevant vesting date.

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Karen S. Wright

In October 2015, Jaguar entered into an offer letter with Ms. Wright to serve as Jaguar's Executive Vice President, Finance, effective November 9, 2015, in an at-will capacity. On December 15, 2015, the Board of Directors approved Ms. Wright's appointment to serve as Jaguar's Chief Finance Officer. Under the offer letter, Ms. Wright's annual base salary is $240,000, she is eligible for an annual target bonus of 25% of her base salary, and she is eligible to participate in the employee benefit plans Jaguar offers to its other employees.

In November 2015, Ms. Wright was granted a stock option to purchase 20,000 shares of common stock at an exercise price of $2.04 per share. The option has a 10-year term and vested as follows: 25% vested on August 9, 2016, 9 months after the hire date, with the remainder vesting equally over the next 27 months such that the option is vested in full on November 9, 2018.

Roger Waltzman

In June 2016, Jaguar entered into an offer letter with Dr. Waltzman to serve as Jaguar's Chief Scientific Officer, effective July 1, 2016, in an at-will capacity. Under the offer letter, Dr. Waltzman's annual base salary is $330,000, he is eligible for an annual target bonus of 40% of his base salary, and he is eligible to participate in the employee benefit plans Jaguar offers to its other employees.

Dr. Waltzman also received a sign-on bonus of $10,000 of which $5,000 was paid on September 30, 2016 and $5,000 was paid on October 15, 2016.

In August 2016, Dr. Waltzman was granted a stock option to purchase 127,500 shares of common stock at an exercise price of $1.47 per share. The option has a 10-year term and vests as follows: 2/36th on the grant date, 7/36th on April 1, 2017, with the remainder vesting equally over the subsequent 27 months such that the option would have vested in full on July 1, 2019 had Dr. Waltzman not resigned in April 2017.

Compensation of Directors

The following table summarizes the total compensation earned in 2015 for Jaguar's non-management directors. Ms. Conte receives no additional compensation for her service as a director.

	Year	Fees Earned or Paid in Cash ($)	Option awards ($)(1)	Total ($)
James J. Bochnowski	2016		63,644	63,644
	2015		58,377	58,377
Folkert W. Kamphuis	2016		17,625	17,625
	2015		145,944	145,944
Jiahao Qiu	2016		1,921	1,921
	2015		29,188	29,188
Zhi Yang	2016		1,921	1,921
	2015		29,188	29,188
John Micek III	2016		81,944	81,944
	2015			
Ari Azhir	2016		35,678	35,678
	2015			

Footnote to Compensation of Directors Table

(1) Represents the dollar amounts recognized for financial statement reporting purposes with respect to the fiscal year (for stock option awards) determined under FASB ASC Topic 718 using

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assumptions set forth in the footnotes to Jaguar's financial statements attached to this joint proxy statement/prospectus. The aggregate number of options held by each non-management director officer as of December 31, 2016 was as follows: Mr. Bochnowski 39,410 shares granted June 2, 2014 and 20,000 shares granted June 2, 2015; Mr. Kamphuis 50,000 shares granted June 2, 2015; Mr. Qiu 10,000 shares granted June 2, 2015; Dr. Yang 10,000 shares granted June 2, 2015. The June 2, 2014 grant to Mr. Bochnowski vests 25% on March 2, 2015 (nine months from grant date), with the remainder vesting equally over the following 27 months such that the options are vested in full on June 2, 2017. All of the June 2, 2015 option grants vest in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

Narrative to Director Compensation Table

Jaguar currently does not pay its directors any cash compensation for their services on Jaguar's board of directors. Jaguar intends to make annual equity grants to directors serving on its board who are not employees nor serving as designees of its investors, along with an additional equity grant to the Chairperson of its board of directors. Jaguar may in the future determine to make additional equity grants or pay other equity compensation for service on its board of directors.

In June 2014, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 39,410 shares of common stock at an exercise price of $4.83 per share, which expires 10 years after the grant date. The option vested as follows: 25% vested on March 2, 2015, 9 months after the grant date, with the remainder vesting equally over the next 27 months such that the option is vested in full on June 2, 2017.

In June 2015, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 20,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 11,293 shares of common stock at an exercise price of $1.58 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In September 2016, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 75,000 shares of common stock at an exercise price of $1.25 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In December 2016, Jaguar granted Mr. Bochnowski, its Chairperson of the Board, a stock option to acquire 16,378 shares of common stock at an exercise price of $0.74 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

Mr. Kamphuis provided consulting services through Kernel Management and Consulting AG from December 2015 through March 2016.

In June 2015, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 50,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 9,504 shares of common stock at an exercise price of $1.58 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

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In August 2016, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 50,000 shares of common stock at an exercise price of $1.47 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In September 2016, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 13,000 shares of common stock at an exercise price of $1.25 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In December 2016, Jaguar granted Mr. Kamphuis, a member of the Compensation and Nominating Committees, a stock option to acquire 13,771 shares of common stock at an exercise price of $0.74 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In June 2015, Jaguar granted Mr. Qui, a member of the Audit Committee, a stock option to acquire 10,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Mr. Qui, a member of the Audit Committee, a stock option to acquire 1,901 shares of common stock at an exercise price of $1.58 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In June 2015, Jaguar granted Dr. Yang, a member of the Audit Committee, a stock option to acquire 10,000 shares of common stock at an exercise price of $6.70 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Dr. Yang, a member of the Audit Committee, a stock option to acquire 1,901 shares of common stock at an exercise price of $1.58 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In April 2016, Jaguar granted Mr. Micek, , a member of the Audit, Compensation and Nominating Committees, a stock option to acquire 96,824 shares of common stock at an exercise price of $1.58 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In December 2016, Jaguar granted Mr. Micek, a member of the Audit, Compensation and Nominating Committees, a stock option to acquire 10,884 shares of common stock at an exercise price of $0.74 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

In December 2016, Jaguar granted Dr. Azhir, a member of the Audit and Compensation Committees, a stock option to acquire 98,050 shares of common stock at an exercise price of $0.74 per share, which expires 10 years after the grant date. The option vests in equal monthly installments such that it is vested in full on the 3-year anniversary of the grant date.

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CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS OF JAGUAR

The following includes a summary of transactions since January 1, 2016, to which Jaguar has been a party in which the amount involved exceeded or will exceed $120,000 and in which any of Jaguar's directors, executive officers or beneficial owners of more than 5% of Jaguar's capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest. Compensation arrangements for Jaguar's directors and executive officers are described elsewhere in this joint proxy statement/prospectus.

Transactions with Napo

Formation

Jaguar was founded in San Francisco, California as a Delaware corporation on June 6, 2013. Napo formed Jaguar to develop and commercialize animal health products. In connection with Jaguar's formation, Jaguar issued 2,666,666 shares of common stock to Napo, pursuant to a stock purchase agreement, for $400 in cash and services to be provided by Napo to Jaguar pursuant to the Service Agreement discussed below. As of December 31, 2013, Jaguar was a wholly-owned subsidiary of Napo and as of December 31, 2014, Jaguar was a majority-owned subsidiary of Napo. As of May 13, 2015, Jaguar is no longer a majority-owned subsidiary of Napo.

On March 31, 2017, Jaguar, Napo, Merger Sub and a Napo representative entered into the Agreement and Plan of Merger, the terms of which are described elsewhere in this joint proxy statement/prospectus.

Napo/Salix Settlement Agreement

In March 2016, Napo settled ongoing litigation with Salix (now owned by Valeant Pharmaceuticals International) and rights to develop, manufacture and commercialize crofelemer previously licensed to Salix in December 2008 in North America, certain European Union countries and Japan were terminated and returned to Napo, along with certain crofelemer active pharmaceutical ingredient inventory, Mytesi® drug product inventory and land. Pursuant to the settlement agreement between Napo and Salix (together with any amendments thereto, sometimes referred to herein as the Napo/Salix Settlement Agreement), upon the consummation of the contemplated merger, Jaguar is required to enter into a letter agreement with Salix (sometimes referred to herein as the Letter Agreement) in the form set forth in Schedule 4.8(c) of the Letter Agreement, pursuant to which Jaguar will agree to assume, be bound by, and perform certain provisions of the Napo/Salix Settlement Agreement as though Jaguar were added alongside Napo as an additional named person for purposes of such provisions.

Napo Service Agreement

Effective July 1, 2016, Napo and Jaguar entered into an employee leasing and overhead allocation agreement (sometimes referred to herein as the 2016 Service Agreement). The initial term of the 2016 Service Agreement was from July 1, 2016 to December 31, 2016, and the term has been extended until the completion of a successful merger between the two companies, or until the proposed merger has been terminated. In connection with the 2016 Service Agreement, Jaguar provided to Napo the services of Jaguar employees, primarily in the areas of supply, manufacturing and quality control and general administrative positions. The 2016 Service Agreement stipulated that Napo reimburse Jaguar for a portion of Jaguar's overhead costs including an allocated amount for rent. For additional information relating to the 2016 Service Agreement, see "Napo Management's Discussion and Analysis of Financial Condition and Results of Operations Overview."

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Napo License Agreement

In January 2014, Jaguar entered into the Napo License Agreement, pursuant to the term sheet for which Jaguar paid Napo a $100,000 option fee, and agreed to make royalty and milestone payments to Napo based on sales of Jaguar's products. Lisa A. Conte, Jaguar's Chief Executive Officer, President and member of Jaguar's board of directors is also the interim chief executive officer and serves on the board of directors of Napo. For additional information relating to the Napo License Agreement, see "Napo Business Intellectual Property Napo License".

In connection with the entry into certain financing arrangements in October 2014, or the Nantucket Financing Arrangements, Napo and Nantucket Investments Limited, or Nantucket, on behalf of Napo's secured lenders, entered into a non-disturbance agreement with respect to the Napo License Agreement. The non-disturbance agreement provides that Jaguar is a third party beneficiary of such agreement and also provides, among other items, that notwithstanding any transfer of or sale or other disposition by Nantucket of the intellectual property and technology licensed to us pursuant to the Napo License Agreement, including without limitation, in connection with any enforcement of the Nantucket Financing Arrangements, transfer in lieu of enforcement or by operation of law, the intellectual property and technology licensed to Jaguar pursuant to the Napo License Agreement shall remain subject to the Napo License Agreement, the Napo License Agreement shall survive in accordance with its terms, and Jaguar's rights under the Napo License Agreement shall not be terminated unless Jaguar fails to make payments thereunder within the time periods required.

Napo Arrangements

Lease

Jaguar's corporate headquarters were located in San Francisco, California, where Jaguar rented approximately 3,125 square feet of office space. Since Jaguar's formation in June 2013 through June 2015, Jaguar shared premises with Napo pursuant to its lease. See "Napo Service Agreement" above. Since March 2014, Jaguar made the rent payments under Napo's lease. The lease was assigned to Jaguar in June 2014 and expired in June 2015.

Napo Beneficial Ownership

The following table sets forth information with respect to beneficial ownership of Napo common stock by the current members of Jaguar's board of directors and Jaguar's executive officers. The column titled "Percentage of Shares Beneficially Owned" is based on a total of 108,202,786 shares of Napo common stock outstanding as of March 31, 2017.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to Napo common stock. Shares of Napo common stock subject to options or warrants and restricted stock units that, in each case, are currently exercisable or vested, or exercisable or subject to vesting within 60 days after the date of this joint proxy statement/prospectus are considered outstanding and beneficially owned by the person holding

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the options or warrants for the purpose of calculating the percentage ownership of that person but not for the purpose of calculating the percentage ownership of any other person.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
James J. Bochnowski(1)	7,007,020	6.5%
Lisa A. Conte(2)	1,394,380	1.3%
Jiahao Qiu		
Zhi Yang, Ph.D.(3)	2,151,174	2.0%
Steven R. King, Ph.D.(4)	389,116	*
Folkert W. Kamphuis		
John Micek, III		
Ari Azhir, Ph.D.		
Karen S. Wright		

*
Less than 1%.

(1)
Consists of 7,007,020 shares of Napo common stock held by the Bochnowski Family Trust. Mr. Bochnowski, a member of Jaguar's board of directors, is a co-trustee and beneficiary of such trust, and shares voting and investment control over such shares with his spouse.

(2)
Includes (i) 637,780 shares of Napo common stock and (ii) a fully-vested option to purchase 757,000 shares of Napo common stock. Ms. Conte, Jaguar's Chief Executive Officer, President and a member of Jaguar's board of directors, is the interim chief executive officer of Napo and a member of Napo's board of directors.

(3)
Includes (i) 30,828 shares of Napo common stock held by Dr. Yang; (ii) 65,309 shares of Napo common stock held by BioVeda China Limited, an entity affiliated with BioVeda Management, Ltd.; and (iii) 2,055,037 shares of Napo common stock held by BioVeda China LP, an entity affiliated with BioVeda Management, Ltd. Dr. Yang, a member of Jaguar's board of directors, is the Chairperson, Founder, Managing Partner and sole shareholder of BioVeda Management, Ltd., and may be deemed to beneficially own such shares.

(4)
Includes (i) 154,116 shares of Napo common stock and (ii) a fully-vested option to purchase 235,000 shares of Napo common stock. Dr. King, Jaguar's Executive Vice President of Sustainable Supply, Ethnobotanical Research and Intellectual Property, held an office in the same capacity at Napo.

In addition, Ms. Conte holds RSUs for an aggregate of 10,474,783 shares of Napo common stock (3,475,734 of which were issued prior to 2011; and 6,999,049 of which were issued in 2011 or later), and Dr. King holds RSUs for an aggregate of 2,042,098 shares of Napo common stock (1,073,273 of which were issued prior to 2011; and 968,825 of which were issued in 2011 or later). Assuming satisfaction of the service requirements, Napo's RSU awards granted in 2011 or later will vest and the shares will be issued when: (i) the performance criteria set out in the award agreement are met (which include (A) the repayment in full by Napo of certain debts owed to third parties and (B) Napo's successful resolution of the litigation against Salix) and (ii) there is a Napo liquidity event (such as a merger, an asset sale or a liquidation or dissolution). Napo's RSU awards granted prior to 2011 will vest and the shares will be issued when there is a Napo liquidity event. For all Napo RSUs, the vesting and issuance criteria must be satisfied by December 31, 2018 or the Napo RSUs will lapse. Pursuant to the merger agreement, at the effective time of the merger, each outstanding Napo RSU, option and warrant, whether or not vested, to receive Napo stock that is outstanding immediately prior to the effective time of the merger will be converted into an RSU, option or warrant to receive Jaguar common stock. See

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"Certain Relationships and Related Party Transactions Transactions with Napo Napo Merger Agreement".

Financings

Settlement Agreements and Investor Rights Agreement

On March 31, 2017, Napo entered into a settlement and discounted payoff agreement (sometimes referred to herein as the Nantucket Settlement Agreement), with the lenders party to Napo's financing agreement, dated as of October 10, 2014 (sometimes referred to herein as the Financing Agreement), and Nantucket, as collateral agent and administrative agent, pursuant to which Napo agreed, simultaneously with the consummation of the merger, (a) to make a cash payment to Nantucket of either $8 million or $8.5 million (depending upon the percentage of outstanding common stock represented by the shares released in the following clause (b)), which will reduce the outstanding principal obligations under the Financing Agreement, and (b) in satisfaction as a compromise for the outstanding obligations under the Financing Agreement and the release of any lien or security interest in respect of such outstanding obligations, (x) to transfer to Nantucket 2,666,666 shares of Jaguar common stock owned by Napo and (y) to cause Jaguar to issue to Nantucket 2,217,579 newly issued shares of Jaguar voting common stock (sometimes referred to herein as the Remaining Tranche C Shares) and 38,180,451 newly issued shares of Jaguar non-voting common stock, which shares are subject to the terms of the Investor Rights Agreement described below.

Napo also entered into settlement agreements with Dorsar Investment Company, Alco Investment Company, Two Daughters LLC, Boies Schiller Flexner LLP and Dan Becka on or about March 31, 2017, pursuant to which Napo agreed to cause Jaguar to issue in the aggregate 4,722,567 shares of Jaguar non-voting common stock and warrants to purchase 1,224,874 shares of Jaguar common stock, with an exercise price of $0.08 per share, to such creditors upon consummation of the merger as a complete settlement and satisfaction of Napo's outstanding obligations to such creditors. Jaguar also agreed to register the resale of these shares on one or more registration statements.

In connection with the execution of the merger agreement and the Nantucket Settlement Agreement, Jaguar and Nantucket entered into the Investor Rights Agreement, dated March 31, 2017 (sometimes referred to herein as the Investor Rights Agreement), pursuant to which, among other things, Jaguar has agreed to register the resale of the shares issued to Nantucket pursuant to the Nantucket Settlement Agreement on one or more registration statements. A portion of these shares will be held in escrow and released to either Nantucket or the former Napo stockholders, depending on whether Nantucket receives sufficient proceeds from the resale of the Tranche A Shares to third parties to satisfy the Hurdle Amounts. Examples illustrating the calculation of the number of shares released from escrow to Nantucket or the former Napo stockholders, as the case may be, and a summary of the Hurdle Amounts at different time periods are set forth in *Annex E* and *Annex F*, respectively, to this joint proxy statement/prospectus. The Investor Rights Agreement also provides that Jaguar cannot pay any dividends on any shares of its capital stock or redeem any shares, except in limited circumstances, without the prior written consent of Nantucket.

On June 27, 2017, Jaguar, Napo and Nantucket entered into the Consent, which, among other things, as a result of certain dilution that might be caused by the issuance of a convertible note as described in the exhibit to the Consent and certain stock issuances by Jaguar since entering into the merger agreement and prior to the consummation of the merger, (x) increases the Remaining Tranche C Shares from 1,940,382 shares of Jaguar voting common stock to 2,217,579 shares of Jaguar voting common stock and (y) reduces the number of Tranche B Shares from 19,900,202 shares of non-voting Jaguar common stock to 19,700,625 shares of non-voting Jaguar common stock. To the extent dilution to the Tranche A Shares as a result of such convertible note issuance or such stock issuances would result in a breach of the Investor Rights Agreement or a failure of the condition set

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forth in Section 2(j) of the Nantucket Settlement Agreement to be satisfied at the closing of the merger, any such breach or failure was waived by Nantucket so long as immediately after the closing of the merger, the Tranche A Shares represent no less than 18.9% of the total outstanding capital stock of Jaguar (on a fully diluted basis as defined in Section 2.1(d) of the Investor Rights Agreement as modified by the Consent).

Under the Consent, the parties also (x) agreed to increase the authorized number of shares of voting common stock under Jaguar's Third Amended and Restated Certificate of Incorporation from 175,000,000 shares to 250,000,000 shares and (y) acknowledged and agreed that the Outside Date specified in Section 10.1(b)(i) of the merger agreement be extended to July 31, 2017 and the date specified in Section 9(a) of the Nantucket Settlement Agreement be extended to July 31, 2017.

Riverside/MEF Exchangeable Promissory Notes

On March 1, 2017, Napo entered into a Note Purchase Agreement with certain purchasers, whereby Napo issued $656,250 in aggregate principal amount of Original Issue Discount Exchangeable Promissory Notes due December 1, 2017 (sometimes referred to herein as the 2017 Exchangeable Notes) to such purchasers at a purchase price of $525,000. The holders of the 2017 Exchangeable Notes may exchange the 2017 Exchangeable Notes for an aggregate of 1,171,875 shares of Jaguar common stock at any time prior to the maturity date and subsequent to the earlier of the effective date of the merger and the date on which the merger is terminated. Each purchaser is required to purchase its pro rata portion of additional 2017 Exchangeable Notes with an aggregate original principal amount of $656,250 for an aggregate purchase price of $525,000, which subsequent purchase will occur no later than the earlier of the consummation of the merger or the termination of the merger. Jaguar has agreed to file a registration statement to register the resale of shares of Jaguar common stock issuable upon exchange of the 2017 Exchangeable Notes within 30 days of the earlier of the effective date of the merger and the merger termination date.

Kingdon Convertible Promissory Notes

On March 31, 2017, Napo entered into an Amended and Restated Note Purchase Agreement (sometimes referred to herein as the Kingdon NPA) with Kingdon Associates, M. Kingdon Offshore Master Fund L.P., Kingdon Family Partnership, L.P., and Kingdon Credit Master Fund L.P. (and, together with any other party purchasing Kingdon Notes (as defined below) pursuant to the Kingdon NPA, sometimes collectively referred to herein as the Kingdon Purchasers), under which remains outstanding $2,500,000 in aggregate principal amount of convertible promissory notes (sometimes referred to herein as the Kingdon Notes) issued by Napo on December 30, 2016 to such purchasers at a purchase price of $2,000,000. Subject to the consummation of the merger, the holders of the Kingdon Notes may convert the Kingdon Notes into shares of Jaguar common stock at a conversion price of $0.925 (i) from the date of the Kingdon Note until the day immediately preceding the one-year anniversary of the Kingdon Note, all, but not less than all, of one-third of the outstanding principal and interest of the Kingdon Note, (ii) from the one-year anniversary of the Kingdon Note until the day immediately preceding the two-year anniversary of the Kingdon Note, all, but not less than all, of an additional one-third of the outstanding principal and interest of the Kingdon Note, and (iii) from the two-year anniversary of the Kingdon Note and thereafter, all, but not less than all, of the outstanding principal and interest of the Kingdon Note. Subject to the satisfaction of certain conditions, each purchaser is required to purchase its pro rata portion of additional Kingdon Notes with an aggregate original principal amount of $7,500,000 for an aggregate purchase price of $6,000,000, which subsequent purchase will occur simultaneously with the consummation of the merger and with effect as of immediately prior to the consummation of the merger.

The Kingdon Notes accrue interest at a rate of 10% per annum and mature on the first date after December 30, 2019 on which a majority of the Kingdon Purchasers have provided written notice to

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Napo requesting payment in full of the outstanding principal and interest of the Kingdon Notes. The obligations of Napo under the Kingdon Notes are secured pursuant to the terms of the Security Agreement, dated December 30, 2016, by and among Napo, Kingdon Capital Management L.L.C. and the purchasers named therein (sometimes referred to herein as the Napo Security Agreement) and the Limited Subordination Agreement, dated December 30, 2016, by and among Napo, the Kingdon Purchasers, Nantucket, the lenders under the Financing Agreement, Dorsar Investment Company, Alco Investment Company and Two Daughters LLC (sometimes referred to herein as the Intercreditor Agreement). Jaguar has agreed to file a registration statement to register the resale of shares of Jaguar common stock issuable upon exchange of the 2017 Exchangeable Notes within 30 days of the earlier of the effective date of the merger and the merger termination date.

Indemnification Agreements

Jaguar has entered into indemnification agreements with each of Jaguar's directors. These agreements, among other things, require Jaguar to indemnify each director to the fullest extent permitted by Delaware law, including indemnification of expenses such as expenses, judgments, penalties, fines and amounts paid in settlement to the extent legally permitted incurred by the director or officer in any action or proceeding, including any action or proceeding by or in right of Jaguar, arising out of the person's services as a director or officer.

Other Transactions

Jaguar has granted stock options and/or RSUs to Jaguar's executive officers. For a description of these options and RSUs, see the section above titled "Compensation of Directors and Executive Officers of Jaguar."

Jaguar also granted stock options to certain members of its board of directors. For a description of these stock options, see the section above titled "Compensation of Directors and Executive Officers of Jaguar."

Policies and Procedures for Related Person Transactions

Jaguar's board of directors has adopted a written related person transaction policy setting forth the policies and procedures for the review and approval or ratification of related-person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which Jaguar was or is to be a participant, where the amount involved exceeds $120,000 and a related person had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by Jaguar of a related person. In reviewing and approving any such transactions, Jaguar's Audit Committee is tasked to consider all relevant facts and circumstances, including, but not limited to, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction and the extent of the related person's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

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SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act, and regulations of the SEC thereunder require Jaguar's directors, officers and persons who own more than 10% of Jaguar common stock, as well as certain affiliates of such persons, to file initial reports of their ownership of Jaguar common stock and subsequent reports of changes in such ownership with the SEC. Directors, officers and persons owning more than 10% of Jaguar common stock are required by SEC regulations to furnish Jaguar with copies of all Section 16(a) reports they file. Based solely on Jaguar's review of the copies of such reports and amendments thereto received by Jaguar and written representations from these persons that no other reports were required, Jaguar believes that during the fiscal year ended December 31, 2016, Jaguar's directors, officers and owners of more than 10% of Jaguar common stock complied with all applicable filing requirements.

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INFORMATION ABOUT THE NAPO SPECIAL MEETING AND VOTE

Date, Time and Place of the Special Meeting

These proxy materials are delivered in connection with the solicitation by the Napo Board of proxies to be voted at the Napo special meeting, which is to be held at 201 Mission Street, Suite 2375, San Francisco, CA 94105, at 9:00 a.m., local time, on July 27, 2017. On or about [•], 2017, Napo commenced mailing this joint proxy statement/prospectus and the enclosed form of proxy to its stockholders entitled to vote at the meeting.

Purpose of the Napo Special Meeting

Napo stockholders will be asked to vote on the following proposals:

1. To adopt the Agreement and Plan of Merger, dated as of March 31, 2017, by and among Jaguar Animal Health, Inc., Napo Acquisition Corporation, Napo Pharmaceuticals, Inc. and a representative of Napo Pharmaceuticals, Inc. (sometimes referred to as the merger agreement), and thereby approve the merger. A copy of the merger agreement has been included as *Annex A* to this joint proxy statement/prospectus.

2. To adjourn the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to adopt the merger agreement.

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

Record Date and Voting Power

Only stockholders of record as of the close of business on June 30, 2017 will be entitled to notice of and to vote at the special meeting or at any subsequent meeting due to an adjournment of the original meeting.

On the record date, June 30, 2017, Napo had one class of voting stock outstanding. On that date, [•] shares of Napo common stock were issued and outstanding. Each outstanding share of common stock entitles the holder to one vote on all matters to be voted upon at the special meeting.

A complete list of stockholders entitled to vote at the Napo special meeting will be available for examination by any Napo stockholder at Napo's headquarters, 201 Mission Street, Suite 2375, San Francisco, CA 94105, for purposes pertaining to the Napo special meeting, during normal business hours for a period of ten days before the Napo special meeting, and at the time and place of the Napo special meeting.

Quorum and Voting Rights

In order to carry on the business of the meeting, Napo must have a quorum. A quorum requires the presence, in person or by proxy, of the holders of a majority of the votes entitled to be cast at the meeting. Proxies received but marked as abstentions, if any, and broker non-votes, if any, will be included in the calculation of the number of shares considered to be present at the meeting for quorum purposes. The affirmative vote of a majority of the outstanding shares of Napo common stock entitled to vote thereon is required to adopt the merger agreement and approve the merger.

Required Vote

To adopt the merger agreement, holders of a majority of the shares of Napo common stock issued and outstanding and entitled to vote thereon must vote in favor of adoption of the merger agreement.

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Because approval is based on the affirmative vote of a majority of the outstanding shares of Napo common stock entitled to vote, a Napo stockholder's failure to vote in person or by proxy at the special meeting, or an abstention from voting, or the failure of a Napo stockholder who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote **"AGAINST"** adoption of the merger agreement.

To approve the adjournment of the special meeting, if necessary or advisable to solicit additional proxies if there are not sufficient votes to adopt the merger agreement and approve the merger at the time of the special meeting, the affirmative vote of the majority of shares present in person or represented by proxy at the meeting and entitled to vote thereon is required, if a quorum is present. Whether or not a quorum is present, a majority of the voting stock represented in person or by proxy may adjourn the meeting until a quorum is present. Shares held by stockholders who are not present at the special meeting in person or by proxy will have no effect on the outcome of any vote to adjourn the special meeting. Broker non-votes and abstentions will have the same effect as a vote **"AGAINST"** the proposal to adjourn the special meeting.

Broker Non-Votes

If your shares are held in an account at a broker or through another nominee, you must instruct the broker or other nominee on how to vote your shares. If you do not provide voting instructions to your broker or other nominee, your shares will not be voted on any proposal on which your broker or other nominee does not have discretionary authority to vote. Broker non-votes, if any, will be counted as being present at the special meeting for purposes of determining a quorum, but will not be voted on those matters for which specific authorization is required. Brokers do not have discretionary authority to vote on the proposal to adopt the merger agreement and approve the merger, or the proposal to adjourn the special meeting. Therefore, if you do not provide voting instructions to your broker, your shares will not be voted on the proposal to adopt the merger agreement, or the proposal to adjourn the special meeting. A broker non-vote will have the same effect as a vote **"AGAINST"** adoption of the merger agreement and as a vote **"AGAINST"** the proposal to adjourn the special meeting.

Abstentions; Non-Voting

For the proposal to adopt the merger agreement and approve the merger, an abstention or a failure to vote will have the same effect as a vote **"AGAINST"** the proposal.

For the proposal to adjourn the Napo special meeting, if necessary or advisable, an abstention will have the same effect as a vote **"AGAINST"** adjourning the special meeting.

Appraisal Rights

Napo stockholders of record have appraisal rights under the DGCL in connection with the merger. Napo stockholders who do not vote in favor of the adoption of the merger agreement and who otherwise fully comply with and follow the applicable provisions of Section 262 will be entitled to exercise appraisal rights thereunder. Through an appraisal, the Court of Chancery of the State of Delaware will determine the "fair value" of Napo shares, which amount may be greater than, less than, or equal to the merger consideration. To exercise appraisal rights, Napo stockholders must (i) not vote in favor of the adoption of the merger agreement, (ii) deliver in the manner set forth below a written demand for appraisal of the stockholder's shares to the Corporate Secretary of Napo before the vote on the adoption of the merger agreement at the special meeting at which the proposal to adopt the merger agreement and approve the merger will be submitted to Napo's stockholders, (iii) continuously hold the shares of record from the date of making the demand through the effective time of the merger, and (iv) otherwise fully comply with and follow the requirements of Section 262. If, after the consummation of the merger, such holder of Napo common stock fails to perfect, withdraws or

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otherwise loses his, her or its appraisal rights, each such share will be treated as if it had been converted as of the consummation of the merger into a right to receive the merger consideration.

The relevant provisions of Section 262 are included as *Annex D* to this joint proxy statement/prospectus. You are encouraged to read these provisions carefully and in their entirety. Due to the complexity of the procedures for exercising your appraisal rights, Napo stockholders who are considering exercising such rights are encouraged to seek the advice of legal counsel. Failure to comply with these provisions will result in the loss of appraisal rights. See the section entitled "Appraisal Rights" beginning on page 293 for additional information and the full text of Section 262 reproduced in its entirety as *Annex D* to this joint proxy statement/prospectus.

Shares Beneficially Owned by Napo Directors and Executive Officers

Napo's directors and executive officers held approximately [•]% of the outstanding shares of Napo common stock on June 30, 2017, the record date for the special meeting.

Voting of Shares; Proxies

Stockholders of record may vote in person by ballot at the special meeting or by submitting their proxies by mail, by indicating their vote on each proxy card they receive, signing and dating each proxy card returning each proxy card in the prepaid envelope that accompanied that proxy card.

Stockholders of Napo who hold their shares in "street name" by a broker, nominee, fiduciary or other custodian should refer to the proxy card or other information forwarded by their broker, nominee, fiduciary or other custodian for instructions on how to vote their shares.

Napo recommends you submit your proxy even if you plan to attend the special meeting. If you properly give your proxy and submit it to Napo in time to vote, one of the individuals named as your proxy will vote your shares as you have directed. If you attend the special meeting, you may vote by ballot, thereby cancelling any proxy previously submitted. If you hold your shares in "street name," you will have to obtain a legal proxy in your name from the broker, nominee, fiduciary or other custodian who holds your shares in order to vote in person at the special meeting. You may vote for or against the proposals or abstain from voting.

If you are a stockholder of record and submit your proxy but do not make specific choices, your proxy will follow the Napo Board's recommendations and your shares will be voted:

1. **"FOR"** the proposal to adopt the merger agreement and approve the merger.

2. **"FOR"** the proposal to adjourn the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to adopt the merger agreement.

Under such circumstances, your proxy will constitute a waiver of your right of appraisal under Section 262 and will nullify any previously delivered written demand for appraisal under Section 262.

Revocability of Proxies and Changes to a Napo Stockholder's Vote

A Napo stockholder has the power to change its vote at any time before its shares are voted at the special meeting by:

notifying Napo's Corporate Secretary, Charles Thompson, in writing at 201 Mission Street, Suite 2375, San Francisco, CA 94105, prior to the Napo special meeting that you are revoking your proxy;

executing and delivering a later dated proxy card; or

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by attending the Napo special meeting and voting your shares in person.

However, if your shares held in "street name" through a brokerage firm, bank, nominee, fiduciary or other custodian, you must check with your brokerage firm, bank, nominee, fiduciary or other custodian to determine how to revoke your proxy.

Solicitation of Proxies

The solicitation of proxies from Napo stockholders is made on behalf of the Napo Board. Napo will pay the costs of soliciting Napo stockholders and obtaining these proxies, including the cost of reimbursing brokers, banks and other financial institutions for forwarding proxy materials to their customers. Proxies may be solicited, without extra compensation, by Napo officers and employees by mail, telephone, fax, personal interviews or other methods of communication. Napo does not expect to engage a proxy solicitation firm to assist Napo in soliciting proxies for the special meeting.

Other Business; Adjournments

Napo is not currently aware of any other business to be acted upon at the Napo special meeting. If, however, other matters are properly brought before the special meeting, your proxies include discretionary authority on the part of the individuals appointed to vote your shares to act on those matters according to their best judgment.

Any adjournment may be made from time to time by the affirmative vote of the holders of a majority of the shares represented at the Napo special meeting in person or by proxy and entitled to vote thereat and, whether or not a quorum is present, without further notice other than by announcement at the meeting.

If the special meeting is adjourned to a different place, date or time, Napo need not give notice of the new place, date or time if the new place, date or time is announced at the meeting before adjournment, unless a new record date is set for the meeting. The Napo Board may fix a new record date if the meeting is adjourned. Proxies submitted by Napo stockholders for use at the special meeting will be used at any adjournment or postponement of the meeting. Unless the context otherwise requires, references to the Napo special meeting in this joint proxy statement/prospectus are to such special meeting as adjourned or postponed.

Attending the Meeting

Subject to space availability, all 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. Registration and seating will begin at 8:30 a.m., local time.

If you are a registered stockholder (that is, if you hold your stock in certificate form), an admission ticket is enclosed with your proxy card. If you wish to attend the special meeting, please vote your proxy but keep the admission ticket and bring it with you to the special meeting.

Napo Proposal 1: Approval of the Agreement and Plan of Merger

At the Napo special stockholders meeting, holders of Napo common stock will be asked to approve the Agreement and Plan of Merger, dated March 31, 2017, by and among Jaguar Animal Health, Inc., Napo Acquisition Corporation, Napo Pharmaceuticals, Inc. and a Napo representative (sometimes referred to herein as the merger agreement). A copy of the merger agreement has been included as *Annex A* to this joint proxy statement/prospectus. In the merger, each issued and outstanding share of Napo common stock (other than dissenting shares and shares held by Jaguar or Napo) will be converted into a contingent right to receive shares of Jaguar common stock. Assuming the resale of the Tranche A Shares to third parties provides Nantucket with sufficient proceeds to

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satisfy the applicable Hurdle Amount, holders of Napo common stock will receive (x) shares of Jaguar common stock which in the aggregate represent up to approximately 20.2% of Jaguar's outstanding common stock and non-voting common stock on a fully diluted basis of Jaguar as of March 31, 2017 (which shares consist of a portion of the shares that Jaguar originally issued to Nantucket), assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more, and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units. The terms of, reasons for and other aspects of the merger agreement and the merger are described in detail in the sections titled "The Merger Agreement" and "The Proposed Merger". The minimum Hurdle Amount needed for the vesting of the contingent rights will vary depending on a number of factors (including, among other things, the time period over which Nantucket receives specified cash returns in connection with the resale of the Tranche A Shares), and Napo stockholders may not receive any shares of Jaguar common stock in certain circumstances (including if the minimum Hurdle Amount is not satisfied). At the closing sales price of Jaguar common stock on the last trading day before the date of this joint proxy statement/prospectus, the resale of the Tranche A Shares to third parties would not provide Nantucket with sufficient proceeds to satisfy the applicable Hurdle Amount. Although the contingent rights will vest upon the satisfaction of the applicable Hurdle Amount, Jaguar may defer making the final determination of the shares issuable to the contingent right holders until the later of (i) the date when any and all indemnification claims timely made under the merger agreement are satisfied and (ii) April 1, 2020. For a discussion of the minimum Hurdle Amount and the calculation of the number of Merger Shares issuable to the holders of contingent rights, see "The Merger Agreement and Related Agreements Merger Consideration Calculation of Shares of Jaguar Common Stock Issuable to Holders of Contingent Rights" and *Annex E* to this joint proxy statement/prospectus.

Required Vote of Stockholders

To adopt the merger agreement (this Proposal 1), holders of a majority of the shares of Napo common stock issued and outstanding and entitled to vote thereon must vote in favor of adoption of the merger agreement. Because approval is based on the affirmative vote of a majority of the outstanding shares of Napo common stock entitled to vote, a Napo stockholder's failure to vote in person or by proxy at the special meeting, or an abstention from voting, or the failure of a Napo stockholder who holds his or her shares in "street name" through a broker or other nominee to give voting instructions to such broker or other nominee, will have the same effect as a vote **"AGAINST"** adoption of the merger agreement.

Recommendation of the Napo Board

THE NAPO BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE APPROVAL OF THE MERGER AGREEMENT.

THE MERGER IS CONDITIONED ON APPROVAL OF THIS PROPOSAL.

Proposal 2: Approval to Adjourn the Special Meeting if Necessary or Advisable to Permit Further Solicitation of Proxies in the Event There Are Not Sufficient Votes at the Time of the Special Meeting to Approve the Merger Agreement Described in Proposal 1

At the Napo special meeting, holders of Napo common stock will be asked to approve the adjournment of the special meeting if necessary or advisable to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to approve the adoption of the merger agreement described in Proposal 1.

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Required Vote of Stockholders

To approve the adjournment of the special meeting, if necessary or advisable to solicit additional proxies if there are not sufficient votes to adopt the merger agreement at the time of the special meeting (this Proposal 2), the affirmative vote of the holders of a majority of shares of Napo common stock, if a quorum is present, is required. The chairman of the meeting may also (regardless of the outcome of the stockholder vote on adjournment) adjourn the meeting to another place, date and time. If a quorum is not present, a majority of the voting stock represented in person or by proxy, or the chairman of the meeting, may adjourn the meeting until a quorum is present. Shares held by stockholders who are not present at the special meeting in person or by proxy will have no effect on the outcome of any vote to adjourn the special meeting. Broker non-votes and abstentions will have no effect on the outcome of any vote to adjourn the special meeting if a quorum is present but will have the same effect as a vote "**AGAINST**" if no quorum is present.

Recommendation of the Napo Board

THE NAPO BOARD UNANIMOUSLY RECOMMENDS A VOTE "**FOR**" THE APPROVAL TO ADJOURN THE SPECIAL MEETING IF NECESSARY OR ADVISABLE TO PERMIT FURTHER SOLICITATION OF PROXIES IN THE EVENT THERE ARE NOT SUFFICIENT VOTES AT THE TIME OF THE SPECIAL MEETING TO APPROVE THE ADOPTION OF THE MERGER AGREEMENT DESCRIBED IN PROPOSAL 1.

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THE PROPOSED MERGER

The following is a discussion of the merger and the material terms of the merger agreement between Jaguar and Napo. You are urged to read carefully the merger agreement in its entirety, a copy of which is attached as Annex A to this joint proxy statement/prospectus and incorporated by reference herein.

General

Jaguar and Napo agreed to the acquisition of Napo by Jaguar through a merger under the terms of the merger agreement that is described in this joint proxy statement/prospectus. Under the terms of the merger agreement, Merger Sub will merge with and into Napo. As a result, Napo will survive the merger and will continue to exist as a wholly-owned subsidiary of Jaguar.

The Jaguar Board is using this joint proxy statement/prospectus to solicit proxies from the holders of Jaguar common stock for use at the Jaguar special meeting. The Napo Board is using this joint proxy statement/prospectus to solicit proxies from the holders of Napo common stock for use at the Napo special meeting. This joint proxy statement/prospectus also forms a part of the registration statement which will be used by Jaguar in connection with the offering of Jaguar common stock and non-voting common stock if the merger is completed.

Napo and Jaguar management view the planned merger of the two companies as an important step in the evolution of both entities and their efforts to develop drugs to advance the standard of care for gastrointestinal disease.

Jaguar Merger Proposal

At the Jaguar special meeting, holders of shares of Jaguar common stock will be asked to vote on (i) the issuance of shares of Jaguar common stock and non-voting common stock as contemplated by the merger agreement, (ii) the issuance of shares of Jaguar common stock upon conversion of the Convertible Promissory Notes, due December 30, 2019, (iii) the issuance of $3,000,000 of Jaguar common stock at a price equal to $0.925 per share to Invesco, pursuant to the Invesco Commitment Letter, (iv) the issuance of Jaguar common stock upon conversion of the Convertible Promissory Note, due August 2, 2018, (v) the amendment of the 2014 Plan, (vi) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to increase the number of authorized shares of common stock from 50 million shares to 300 million shares and change the Jaguar corporate name to "Jaguar Health, Inc.", (vii) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to authorize a class of non-voting common stock, and (viii) the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation to require Nantucket's prior written consent before the issuance of dividends to holders of Jaguar common stock and/or non-voting common stock.

The merger will not be completed unless Jaguar stockholders approve proposals (i), (vi), (vii) and (viii).

A separate vote by the holders of Jaguar common stock on the merger agreement or the merger itself is not required under Delaware law.

Napo Merger Proposal

At the Napo special meeting, holders of shares of Napo common stock will be asked to vote on, among other things, the adoption of the merger agreement and thereby approve the merger. **The merger will not be completed unless Napo stockholders adopt the merger agreement and thereby approve the merger.**

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Merger Consideration

Common Stock and Non-Voting Common Stock

Subject to the terms and conditions of the merger agreement, at the effective time of the merger, (i) existing creditors of Napo will receive an aggregate of not more than 2,282,445 shares of Jaguar common stock and not more than 42,957,072 shares of Jaguar non-voting common stock in full satisfaction of all existing indebtedness then owed by Napo to such creditors and (ii) an existing Napo stockholder will be issued an aggregate of approximately 3,243,243 shares of Jaguar common stock in return for $3 million of new funds invested into Jaguar by such investor. However, assuming the resale to third parties of the Tranche A Shares issued by Jaguar to Nantucket pursuant to the Napo debt settlement provides Nantucket with sufficient proceeds to meet the applicable Hurdle Amounts, former Napo stockholders will receive (x) shares of Jaguar common stock which in the aggregate represent up to 20.2% of Jaguar's outstanding common stock and non-voting common stock on a fully diluted basis of Jaguar as of March 31, 2017 (which shares consist of a portion of the shares that Jaguar originally issued to Nantucket), assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more and (y) if the applicable Hurdle Amount is achieved before all of the Tranche A Shares are sold, additional shares of the Jaguar common stock (equal to 50% of the unsold Tranche A shares), which will be distributed pro rata among holders of contingent rights and holders of Napo restricted stock units.

Shares of Jaguar non-voting common stock are the same in all respects to shares of Jaguar's common stock, except that holders of shares of non-voting common stock are not entitled to vote on matters submitted to Jaguar stockholders other than a change of control of Jaguar, and shares of non-voting common stock are convertible into shares of common stock on a one-for-one basis (i) at the option of the respective holders thereof, at any time and from time to time on or after April 1, 2018 or (ii) automatically, without any payment of additional consideration by the holder thereof, (x) upon a transfer of such shares to any person or entity that is neither an affiliate of Nantucket nor an investment fund, investment vehicle or other account, that is, directly or indirectly, managed or advised by Nantucket or any of its affiliates pursuant to a sale of such stock to a third-party for cash in accordance with the terms and condition set forth in the Investor Rights Agreement, or (y) upon the release or transfer of such shares to the Napo Legacy Stockholders.

Jaguar will assume (i) each outstanding and unexercised option to purchase Napo common stock, which will be converted into options to purchase Jaguar common stock, (ii) each outstanding warrant to purchase Napo common stock, which will be converted into warrants to purchase Jaguar common stock, and (iii) each outstanding restricted stock unit to acquire Napo common stock, which will be converted into restricted stock units to acquire Jaguar common stock.

Based on the number of shares of Jaguar common stock issued and outstanding as of March 31, 2017, an aggregate of up to approximately 69,299,346 shares of Jaguar common stock and non-voting common stock will be issued upon the closing of the merger and the related Napo debt settlement, which will represent approximately 75% of the total Jaguar common stock and non-voting common stock issued and outstanding immediately following the merger. The aggregate number of shares of Jaguar common stock and non-voting common stock to be issued to the Napo Stakeholders will represent approximately 75% of the shares of Jaguar common stock and non-voting common stock issued and outstanding immediately after the merger. The amounts and percentages provided above are calculated based on a fully diluted basis of Jaguar as of March 31, 2017 assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more.

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Fractional shares of Jaguar common stock will not be delivered pursuant to the merger. Instead, any fractional shares will be rounded down to the next whole number of shares.

The minimum Hurdle Amount needed for the vesting of the contingent rights will vary depending on a number of factors (including, among other things, the time period over which Nantucket receives specified cash returns in connection with the resale of the Tranche A Shares), and Napo stockholders may not receive any shares of Jaguar common stock in certain circumstances (including if the minimum Hurdle Amount is not satisfied). For a discussion of the minimum Hurdle Amount and the calculation of the number of Merger Shares issuable to the holders of contingent rights, see "The Merger Agreement and Related Agreements Merger Consideration Calculation of Shares of Jaguar Common Stock Issuable to Holders of Contingent Rights" and *Annex E* to this joint proxy statement/prospectus.

Adjustments

The merger consideration will be equitably adjusted to provide Napo creditors and Invesco with the same economic effect contemplated by the merger agreement if, at any time between the signing and the effective time of the merger, there is any change in the outstanding shares of capital stock of Napo or Jaguar by reason of any reclassification, recapitalization, split-up, combination, exchange of shares or similar readjustment within such period, or a stock dividend with a record date during such period.

Treasury Shares; Shares Owned by Jaguar

At the effective time of the merger, each share of Napo common stock (i) held as a treasury share by Napo or (ii) owned of record by Jaguar will, in each case, be cancelled, and no consideration will be delivered in exchange for those shares.

Background of the Merger

Historical Background

Napo formed Jaguar to develop and commercialize animal health products. Effective as of December 31, 2013, Jaguar was a wholly-owned subsidiary of Napo, and until Jaguar's initial public offering in May 2015, Jaguar was a majority-owned subsidiary of Napo.

Jaguar has been operating at a net loss since inception, based upon a business plan that anticipated raising additional funds through debt or equity financing to operate beyond the second quarter of 2017. Due to current market conditions, Jaguar's current liquidity position and its depressed stock price, Jaguar came to believe it would be challenging to obtain sufficient/adequate equity or debt financing on acceptable terms, if at all to pursue its business as desired. As a result, Jaguar's board of directors began discussing and evaluating its strategic opportunities to enhance stockholder value beginning in the second half of 2015. Jaguar's management provided Jaguar's board of directors with management's preliminary assessment of a variety of strategic alternatives that Jaguar could pursue to enhance stockholder value, including engaging in a merger transaction with other pharmaceutical companies focused on human and/or animal health or partnering with one or more drug manufacturers to forward integrate Jaguar to an important and growing revenue stream. After preliminary discussions with certain U.S. and international animal health companies, Jaguar's board determined that none of these alternatives provided Jaguar with sufficient potential for long-term growth on mutually agreeable terms. After the acquisition of Salix Pharmaceuticals, Ltd., or Salix, by Valeant Pharmaceuticals International Inc., or Valeant, in 2015, Napo was engaged in discussions with Valeant to terminate the license agreement for Mytesi between Salix and Napo. The Jaguar Board saw this as an opportunity for Jaguar to acquire all rights for crofelemer, and own the harvest and extract production at a scale that would never be achievable with just animal health products. The Jaguar Board believed that Napo

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served as a unique candidate for a potential merger given the shared history and skill sets of the two companies and shared focus on crofelemer-based products.

Jaguar Strategic Alternatives and Significant Corporate Events

Throughout the second half of 2015, three members of Jaguar's Board, Mr. Bochnowski, Ms. Conte and Mr. Kamphuis, as part of their review of strategic alternatives, met individually or as a group, with representatives from different financial institutions, including Commerzbank, Guggenheim Partners and Aegis Capital, and engaged in discussions regarding opportunities for Jaguar to find suitable partners or evaluate the potential of a merger with Napo.

Between January and April 2016, Mr. Bochnowski, Ms. Conte, Mr. Kamphuis and Ms. Wright discussed, including in some such discussions with a representative of an investment bank, potential plans for future expansion and fund raising. Given the lack of strategic alternatives with partners that recognized the potential value of Jaguar's products and product pipeline, coupled with the unique synergies between Jaguar and Napo, such as a shared Chief Executive Officer and shared focus on developing and commercializing drug products whose active pharmaceutical ingredient is crofelemer, the Jaguar Board decided to investigate the feasibility of a merger with Napo.

On April 1, 2016, Mr. Bochnowski, Mr. Kamphuis and Mr. Micek from the Jaguar Board and Ms. Conte and Ms. Wright from the management team discussed with a representative of one of the investment banks the relative values of the two companies. The Jaguar Board decided that it needed an independent M&A Committee to explore a merger with Napo. Given her executive management position at both Jaguar and Napo, Ms. Conte recused herself from direct negotiations on behalf of both Jaguar and Napo.

The Jaguar Board established an independent M&A Board Committee, initially comprising of Mr. Kamphuis, as chairman, and Mr. Micek, and subsequently Dr. Azhir after she joined the Jaguar Board in December 2016, to evaluate a potential merger with Napo. Following April 1, 2016, the Jaguar Board decided to engage Stifel to act as its financial advisor in connection with the Jaguar Board's analysis of a potential transaction with Napo, and signed an engagement letter with Stifel as of January 19, 2017.

Between April 1 and April 11, 2016, Jaguar's M&A Committee convened several times to discuss the relative valuation of the two companies, the underlying sales forecasts and performed initial due diligence steps to confirm assumptions in the valuation model.

On April 12, 2016, Jaguar's M&A Committee convened to finalize the recommendation to the Jaguar Board. The Jaguar Board approved the non-binding offer letter to be sent to Napo detailing the terms and conditions and due diligence requirements. The non-binding letter included a 1-to-1 Napo-to-Jaguar value ratio to calculate the relative ownership of the combined entity. The Jaguar Board approved the recommendation and offer letter, which was sent to the Napo Board that same day.

On April 19, 2016, Mr. Kamphuis and Mr. Stock, a Napo Board member and Chair of Napo's M&A committee had a phone conversation to discuss the assumptions Jaguar used to calculate Napo's enterprise value, including the probability of success of Napo's research and development projects and the cost of development and funding for those projects.

On April 26, 2016, the Jaguar Board received a counter offer from Napo, which was supported by new information about Napo's progress in negotiating a licensing deal for their lead product. The counter offer included a Napo-to-Jaguar value ratio between 4-to-1 and 5-to-1 to calculate the relative ownership of the combined entity, highlighting the difference in the views between the respective Boards on the relative valuation of the two companies. The counter offer also included a chronological list of anticipated development milestones to support the value of Napo as a partner and proposed the

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inclusion of Napo representation on the Board of the combined company to maximize the combined company's ability to fully realize the potential of crofelemer in human markets.

Between April 26 and May 5, 2016, the Jaguar M&A Committee worked to understand the differences and discussed with the Napo M&A Committee the underlying assumptions and the respective business plans of the companies to come to an agreeable valuation that both committees would feel comfortable to recommend to their respective Boards. As part of the due diligence, both companies presented more detail in management presentations to the full Boards of the respective companies. The Napo presentation was led by Greg Stock, Napo Board member and Chair of Napo's M&A committee, and the presenters were Katie MacFarlane and Brian Zorn. Charles Thompson, Napo's CFO, was also present. From Jaguar, Mr. Kamphuis, Mr. Bochnowski, Mr. Micek, Mr. Yang and Ms. Wright were present.

On May 4, 2016, the Jaguar M&A Committee met to prepare an updated offer proposal for the Jaguar Board. The proposal was presented at the board meeting the next day and rejected by the Jaguar Board. The Jaguar Board was concerned with the ownership ratio and Napo's ability to meet the debt free requirement.

In the days between May 5 and May 10, there was continued dialogue between the Jaguar M&A Committee and Napo, and Napo was asked to provide significantly more detail about the negotiations with potential partners and their views on how to fund the development of new indications for crofelemer use in humans. The information was used to further fine tune the evaluation model and resulting relative values.

The full Jaguar Board met on May 9, 2016, to discuss the new and updated information and the proposed offer as recommended by the Jaguar M&A Committee. The Jaguar Board approved the recommendation and offer. The offer letter reflecting the Jaguar Board's decision was sent to Napo on May 10, which letter included a 2.5-to-1 Napo-to-Jaguar value ratio to calculate the relative ownership of the combined entity, a condition that Napo own its assets and intellectual property necessary for the independent operation of its business, a condition that Napo be acquired free and clear of all liens and encumbrances, a condition that the board of directors of the combined company include representation from Napo, a condition that Napo obtain full funding from a third party for its anticipated IBS-D claim development costs and expenses, and a condition that Napo bring $3 million or more in free working capital to the combined company.

Mr. Kamphuis and Mr. Stock, the chairpersons of the respective Jaguar and Napo M&A Committees, met on May 12, 2016 in New York to discuss the latest offer made by Jaguar, the conditions of the offer and the major projects of each company, and Jaguar received initial feedback from the Napo Board on the offer of May 10. Mr. Kamphuis and Mr. Stock discussed relative values of the two companies and sought to establish a negotiated set of assumptions that would be acceptable to both companies.

Between May 12 and August 5, 2016, the Jaguar M&A Committee had several interactions with the Napo Board, as they worked with the Napo management to do a licensing deal and negotiate with the debt holders to find solutions to meet the Jaguar requirement that Napo be debt free for the merger to be completed.

On August 5, 2016, the Jaguar M&A Committee discussed the deal terms that Napo had negotiated with a potential partner for Mytesi in the U.S. The deal was different from what was presented in May and the Jaguar M&A Committee reviewed the new terms and discussed with Stifel the potential impact of the new terms on relative potential values of Jaguar and Napo. Napo provided no update on their efforts to restructure the debt, and the Jaguar M&A Committee decided to wait until those terms would be available before discussing value again with Napo.

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On August 8, 2016, the Jaguar M&A Committee engaged in further discussion with the assistance of Stifel on the financial aspects of the deal terms Napo negotiated with the potential partner, including Napo's sales forecasts and projected expenses. The Jaguar M&A Committee identified further details needed to complete the analysis, and data was requested from Napo.

On August 9, 2016, the Jaguar M&A Committee discussed the deal terms Napo negotiated with the potential partner, particularly the sales and promotional costs needed to achieve the sales forecast that served as the basis for the deal.

On August 12, 2016, the Jaguar M&A Committee updated the full Jaguar Board at the scheduled board meeting and explained that Napo was working independently on restructuring their debt and that further action would be needed before Jaguar would receive confirmation that Napo could meet the debt free requirement for Jaguar's offer.

On August 13, 2016, Mr. Kamphuis and Mr. Stock discussed by phone Napo's proposal to negotiate a debt settlement with Nantucket to convert the debt that Napo owed to Nantucket into equity in Napo, which would become equity in Jaguar following the merger.

On September 9, 2016, Mr. Stock provided Mr. Kamphuis an update on Napo's debt restructuring and inquired about the possibility of Jaguar issuing preferential stock or a board position to Nantucket. Mr. Kamphuis described the challenges of Jaguar granting those requests but indicated that Jaguar would consider offering Nantucket the opportunity to appoint an observer to Jaguar's Board as part of the debt restructuring.

On September 15, 2016, the Jaguar Board had a teleconference in which the terms and conditions of the potential merger were extensively discussed, and the Jaguar Board asked the Jaguar M&A Committee Chairman to reach out and discuss with the Napo team the details of Napo's debt restructuring, and assuming adequate progress was made on such restructuring, Jaguar's plans to send an updated offer letter the following week.

On September 21, 2016, the Jaguar M&A Committee sent an updated offer letter to the Napo Board, which included a 3-to-1 Napo-to-Jaguar value ratio to calculate the relative ownership of the combined entity, a condition that Napo own its assets and intellectual property necessary for the independent operation of its business, a condition that Napo is acquired free and clear of all liens and encumbrances, and a condition that the board of directors of the combined company include representation from Napo.

On November 4, 2016, Mr. Kamphuis and Mr. Stock discussed the ongoing negotiations between Napo and its creditors on the debt restructuring. Mr. Stock asked Mr. Kamphuis to confirm the number of shares of Jaguar that would be included in the deal, and the two discussed the inclusion of out of the money warrants and stock compensation that were not in the previous offer letter.

On November 22, 2016, the Jaguar M&A Committee had a meeting to discuss a request from Napo to join a negotiation between Napo management and Napo's Board and Nantucket. The Jaguar M&A Committee decided to attend, but limit its contribution to what was already in the latest offer letter sent to the Napo Board and not take part in any negotiation.

Between November 23 and December 1, 2016, the Jaguar M&A Committee had discussions with Mr. Stock, Mr. Thompson and Ms. Conte to understand the debt restructuring deal Napo was negotiating with Nantucket and reviewed the impact of the terms of the debt restructuring on the Jaguar's Board ability to effectively manage Jaguar post-merger, raise money and create shareholder value.

On December 2, 2016, Mr. Bochnowski and Mr. Kamphuis participated as observers, by telephone, in a negotiation session between Napo and Nantucket.

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On December 12, 2016, the Jaguar M&A Committee held a teleconference to discuss the draft term sheet between Napo and Nantucket as provided by Napo, including the type of Jaguar equity that Nantucket would receive as part of the debt restructuring and the voting rights associated therewith.

On December 15, 2016, at the request of Nantucket, the Chairman of the Jaguar Board and the Jaguar M&A Committee had a call with representatives of the investment adviser to Nantucket, in which the Jaguar Board was asked to make concessions with regards to the Jaguar equity that Nantucket would receive as part of the debt restructuring. The Jaguar Board members unanimously turned down the request and maintained the position that the Jaguar stock received by Nantucket would not have preferential rights.

On January 12, 2017, the Jaguar M&A Committee met to discuss the potential transaction and, as part of that meeting, discussed with representatives of Stifel the potential methodology for assessing the relative values of Jaguar and Napo. Afterwards, Jaguar and Napo agreed to exchange additional information on their respective business plans and other financial data.

On January 17, 2017, Jaguar received a counter offer from Napo, detailing the final agreed terms of the debt restructuring. Under the final terms of the debt structuring, a substantial portion of the Nantucket secured debt would be settled with Jaguar common stock plus $8 million in cash paid to Nantucket. In addition, the outstanding amounts owed by Napo to certain of Napo's other creditors, such as Dorsar Investment Company, Alco Investment Company, Two Daughters LLC, Boies Schiller Flexner LLP and Dan Becka, would be settled with Jaguar common stock and warrants. The Jaguar M&A Committee met on the same day to discuss the offer and voted unanimously to recommend approval of the counter offer to the Jaguar Board.

On January 18, 2017, the independent members of Jaguar's Board, Mr. Bochnowski, Dr. Azhir, Mr. Micek, Mr. Kamphuis, Mr. Yang and Mr. Qiu, met to discuss the Jaguar M&A Committee's recommendation and the Jaguar Board voted unanimously to approve the recommendation to accept the Napo counter offer.

On January 30, 2017, the full Jaguar Board met to discuss the final binding merger terms and address outstanding issues regarding the Napo debt restructuring agreements, such as the treatment of pending Jaguar share issuances and existing Jaguar convertible securities in the calculation of the 3-to-1 Napo-to-Jaguar value ratio and the break-up fee.

On February 7, 2017, the Jaguar M&A Committee met to review the final binding term sheet and prepare its recommendation for the Jaguar Board. The Jaguar Board reviewed and approved the proposed binding agreement of terms to merge.

On February 8, 2017, Jaguar and Napo entered into the binding agreement of terms to merge. The transaction was approved by the unanimous vote of independent and disinterested members of each of Jaguar's and Napo's Board of Directors. The binding financial terms of the merger include a 3-to-1 Napo-to-Jaguar value ratio to calculate the relative ownership of the combined entity. The binding financial terms of merger also set forth the financial terms of the merger and customary conditions to closing, including the completion of due diligence, receipt of a fairness opinion, and stockholder and other approvals. Additionally, the binding financial terms of the merger and conditions to closing included provisions that (i) Napo's secured convertible debt would not exceed $10.0 million and its unsecured debt would not exceed $3.0 million, and (ii) a third party will invest $3.0 million in Jaguar for approximately four million shares of newly issued common stock of Jaguar with the investment proceeds loaned to Napo immediately prior to the consummation of the merger. The binding financial terms of merger also provided that if the merger failed to close for any reason on or prior to July 31, 2017, other than as a result directly or indirectly of (x) lack of stockholder approval by either party or (y) Napo (i) failing to perform in accordance with the terms and conditions of the binding financial terms of merger or (ii) failing to abide by or breaching the provisions or representations, warranties

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and covenants of the binding financial terms of merger or the merger documents, then, on or before the close of business on August 7, 2017, Jaguar will be required to issue 2,000,000 shares of its restricted common stock to Napo.

On March 28, 2017, Jaguar's board of directors held a meeting that representatives of Reed Smith LLP and Stifel attended at the invitation of Jaguar's board of directors. During the meeting, members of Mr. Conte and Ms. Wright reviewed the key features of the proposed business combination between Jaguar and Napo, including: structure and timing considerations and the relative percentages of ownership of the existing Jaguar stockholders, on the one hand, and the Napo stockholders (including investors in Napo's planned concurrent financing), on the other hand, following the completion of the merger; the planned concurrent financing of Napo; the terms of support agreements from certain Napo directors, officers, stockholders and affiliates, as well as Jaguar directors, officers and affiliates, to vote in favor of the proposed business combination; the closing conditions in the merger agreement as well as the settlement agreement and investor rights agreement for Napo's planned concurrent financing; and the termination provisions set forth in the merger agreement. In addition, representatives of Stifel reviewed with Jaguar's Board Stifel's financial analysis of the consideration proposed to be paid by Jaguar in the transaction, during which members of Jaguar's Board asked questions and discussed the results of different valuation analyses performed. Representatives of Stifel then delivered to Jaguar's Board an oral opinion, subsequently confirmed in writing by delivery of a written opinion dated March 28, 2016, that, as of that date and based upon and subject to the various limitations, matters, qualifications and assumptions set forth therein, the transaction consideration (as described in the opinion) to be issued by Jaguar in the transaction (as described in the opinion) was fair to Jaguar from a financial point of view. For more information about Stifel's opinion, see "The Proposed Merger Opinion of Jaguar Financial Advisor" beginning on page 275 and *Annex C* to this joint proxy statement/prospectus. Representatives from Reed Smith reviewed with Jaguar's Board the fiduciary duties of the board members in the context of the proposed business combination. During the various discussions, Jaguar's Board asked questions and discussed the terms and features of the proposed business combination, including provisions of the proposed merger agreement and related documentation. After further discussion among Jaguar's directors, Jaguar's Board unanimously (i) determined that the merger and the other transactions contemplated by the merger agreement were fair to and in the best interests of Jaguar and its stockholders, (ii) determined that contingent rights to receive Jaguar common stock were the appropriate form of merger consideration for the Napo stockholders in light of Napo's inability to pay its outstanding debt obligations as they came due and Nantucket's willingness to accept a discounted payoff of its debt to Napo if the merger consideration was in the form of the contingent rights, thereby providing the opportunity for the Napo stockholders to, despite Napo's outstanding debt obligations, potentially benefit from the resale of the Jaguar common stock proposed to be issued to Nantucket, (iii) approved and adopted the merger agreement and the transactions contemplated thereby, subject to finalization of the merger agreement and ancillary documents by Jaguar's management in consultation with Jaguar's legal counsel, with such changes thereto as Jaguar's management deems to be in the best interests of Jaguar and its stockholders, (iv) resolved to recommend that the Jaguar stockholders vote to approve the merger, adopt the merger agreement and approve and/or adopt the other transactions and arrangements as contemplated by the merger agreement, including the issuance of shares of Jaguar common stock and contingent rights to receive shares of Jaguar common stock in the merger and (v) approved the Note Purchase Agreement and to make the 2017 Exchangeable Notes exchangeable into shares of Jaguar common stock in connection with the merger and pursuant to the terms of the form of 2017 Exchangeable Note that had been distributed for review in advance of the meeting.

On March 31, 2017, members of the Jaguar and Napo management teams met, together with representatives of Reed Smith LLP, Jaguar's legal counsel, and Boies, Schiller & Flexner LLP, Napo's legal counsel, to finalize the merger agreement and related transaction documents. After finalization, Jaguar and Napo entered into the merger agreement and related transaction documents.

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Recommendation of the Jaguar Board and its Reasons for the Merger

The Jaguar Board's decision to approve the merger and the merger agreement and to recommend to Jaguar's stockholders that they vote for the adoption of the merger agreement was based on a number of factors. The following are all of the material factors considered by the Jaguar Board (which were thoroughly discussed by the Jaguar Board with its outside advisors and members of Jaguar senior management):

Jaguar believes the planned merger will allow Jaguar to generate revenue from sales of crofelemer, under the brand name Mytesi, Napo's FDA approved drug product for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy;

Jaguar management believes Jaguar will benefit from the synergies and economies of scale that a merger should create in manufacturing and commercialization of crofelemer for various human and animal indications. The products and product candidates of both companies products are linked by a common mechanism of action that is highly conserved across all animals and has the potential to change the standard of care for watery diarrhea and dehydration to which it can lead;

Napo's technology for proprietary gastrointestinal disease products is central to Jaguar as well as Napo;

Jaguar's management believes that the commercial readiness that Napo's team would bring to a combined entity would prove beneficial for Jaguar as it prepares for the launch of its first prescription products Canalevia for canine diarrhea, and Equilevia for equine gastric ulcers if approved;

The formulation of Mytesi, Napo's FDA approved human prescription drug, is the formulation of Canalevia, Jaguar's lead crofelemer-based drug product candidate, which is under investigation for both acute diarrhea and chemotherapy-induced diarrhea in dogs. This mitigates the risk related to the Chemistry, Manufacturing and Controls section of Jaguar's New Animal Drug Application for Canalevia, and provides Jaguar with forward-integrated quality and supply chain readiness;

Canalevia is the subject of a recently announced development and co-promotion deal between Jaguar and Elanco US Inc. Jaguar believes this collaboration was aided by the commercially active supply chain Napo has in place that Jaguar can access, and that the Elanco deal foreshadows the type of portfolio management that is key to Jaguar's future development and that of the merged company;

Jaguar expects the merger would play a significant and positive role in supporting the development of crofelemer to address the problem of chemotherapy-induced diarrhea in companion animals;

Jaguar believes that both companies will benefit from the efficiencies of combining the skillsets of the highly complementary Napo and Jaguar teams;

Jaguar believes both company's commercialization efforts will benefit from common messaging and the resulting brand awareness;

Jaguar believes that the global unencumbered rights to Mytesi and a host of crofelemer-based human products, combined with horizontal product leverage to multiple animal species, will provide the combined company with a strong foundation for collaborations;

Jaguar and Napo have a well-established history together; Napo was originally founded to focus on development and commercialization of human therapies derived from plants used traditionally in rainforest areas. In 2013, Napo formed Jaguar and licensed to Jaguar the

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exclusive worldwide rights for all veterinary applications to Crofelemer and all Napo technology; and

Jaguar believes that the weaving of clinical indications between humans and animals that a merger will support will provide learning, modeling, and efficiencies in both directions.

In addition to the above factors, the Jaguar Board also identified and considered the following material uncertainties, risks and other potentially negative factors in its consideration of the merger and the merger agreement:

the historical poor financial performance of Napo which could continue after the completion of the merger, which was balanced by the fact that Napo has settled its litigation with Salix and will settle its debt obligations to Nantucket;

the challenges and costs of combining the two businesses and the risks of completing the integration, which could harm the combined company's operating results and preclude the realization of anticipated synergies or benefits from the merger;

the potential for diversion of management and employee attention from other strategic priorities and for increased employee attrition both before and after the closing of the merger agreement, and the potential adverse effect on the business and relations of Jaguar with customers and suppliers;

the dilution to current Jaguar stockholders from the issuance of additional shares of Jaguar common stock in connection with the merger and the other transactions contemplated by the merger agreement, which could result in a decline in the price of Jaguar common stock;

the termination fee of 2,000,000 shares of Jaguar common stock, issuable by Jaguar to Napo upon the occurrence of certain events;

the substantial costs associated with completing the merger, including the costs of integrating business of Jaguar and Napo, which could have an adverse effect on the combined company's future results of operations;

the potential risk that the merger would not be completed in a timely manner or at all; and

the potential risks listed in the "Risk Factors" section above.

The Jaguar Board weighed these positive and negative factors, realizing that future results are uncertain, including any future results considered or expected in the factors noted above. In addition, many of the nonfinancial factors considered were highly subjective. As a result, in view of the number and variety of factors they considered, the Jaguar Board did not consider it practicable and did not attempt to quantify or otherwise assign relative weights to the specific factors it considered. Rather, the Jaguar Board made its determination based on the totality of the information it considered. Individually, each director may have given greater or lesser weight to a particular factor or consideration.

In addition, the Jaguar Board did not undertake to make any specific determination as to whether any particular factor, or any aspect of any particular factor, was favorable or unfavorable to its ultimate determination, but rather conducted an overall analysis of the factors described above, including discussions with Jaguar's management team and Jaguar's outside legal and financial advisors. Based on the totality of the information presented, the Jaguar Board determined that Jaguar should proceed with the merger and the merger agreement, and recommends that the Jaguar stockholders approve the issuance of common stock and non-voting common stock and the adoption of Jaguar's Third Amended and Restated Certificate of Incorporation.

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The Jaguar Board believes that, overall, the potential benefits of the merger to Jaguar and its stockholders outweighs the risks mentioned above.

The foregoing discussion of the information and factors considered by the Jaguar Board is forward-looking in nature. This information should be read in light of the factors described under the section entitled "Cautionary Statement Regarding Forward-Looking Statements" beginning on page 94.

Recommendation of the Napo Board and its Reasons for the Merger

The Napo Board's decision to approve the merger and the merger agreement and to recommend to Napo's stockholders that they vote for the adoption of the merger agreement was based on a number of factors. The following are all of the material factors considered by the Napo Board:

- Napo management believes Napo will benefit from the synergies and economies of scale that a merger should create in manufacturing and commercialization of crofelemer for various human and animal indications. The products and product candidates of both companies products are linked by a common mechanism of action that is highly conserved across all animals and has the potential to change the standard of care for watery diarrhea and the devastating dehydration to which it can lead;

- Napo expects that the merger would play a significant and positive role in supporting the development of crofelemer to address the problem of chemotherapy-induced diarrhea in humans;

- Napo believes that a merger will enable both companies, through a joint management team, to enhance the potential value creation for stockholders;

- Napo believes that the global unencumbered rights to Mytesi and a host of crofelemer-based human products, combined with horizontal product leverage to multiple animal species, will provide the combined company with a strong foundation for collaborations;

- Napo believes that both companies will benefit from the efficiencies of combining the skillsets of the highly complementary Napo and Jaguar teams;

- Napo believes both companies' commercialization efforts will benefit from common messaging and the resulting brand awareness;

- Jaguar and Napo have a well-established history together; Napo was originally founded to focus on development and commercialization of human therapies derived from plants used traditionally in rainforest areas. In 2013, Napo formed Jaguar and licensed to Jaguar the exclusive worldwide rights for all veterinary applications to Crofelemer and all Napo technology; and

- Napo believes that the weaving of clinical indications between humans and animals that a merger will support will provide learning, modeling, and efficiencies in both directions.

In addition to the above factors, the Napo Board also identified and considered a number of uncertainties, risks and other potentially negative factors in its consideration of the merger and the merger agreement, including the following:

the fact that the merger may not be completed in a timely manner or at all and the potential adverse effect of the public announcement of the merger on the ability of Napo to obtain financing in the future in the event the merger is not completed;

the risks and costs to Napo if the merger is not completed, including the diversion of management and employee attention, potential employee attrition and the potential damaging effects on Napo's business and relations with customers, suppliers and vendors;

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the transaction costs to be incurred in connection with the merger will be quite significant, which could impact results of performance;

the restrictions on the conduct of Napo's business prior to completion of the merger, which could delay or prevent Napo from undertaking material strategic opportunities that might arise pending completion of the merger to the detriment of Napo's stockholders and the potential duration of the period between signing and closing; and

the fact that the merger consideration consists solely of a contingent right to receive stock, which could result in the Napo stockholders receiving fewer shares of Jaguar common stock than expected or none at all and being adversely affected by a decrease in the trading price of Jaguar common stock after the date of execution of the merger agreement, which is a risk due to the public reporting requirements of Jaguar.

The Napo Board weighed these positive and negative factors, realizing that future results are uncertain, including any future results considered or expected in the factors noted above. In addition, many of the nonfinancial factors considered were highly subjective. As a result, in view of the number and variety of factors they considered, the Napo Board did not consider it practicable and did not attempt to quantify or otherwise assign relative weights to the specific factors it considered. Rather, the Napo Board made its determination based on the totality of the information it considered. Individually, each director may have given greater or lesser weight to a particular factor or consideration.

The Napo Board believed that, overall, the potential benefits identified above of the merger to Napo and its stockholders outweighed the risks considered by the Napo Board mentioned above.

The foregoing discussion of the information and factors considered by the Napo Board is forward-looking in nature. This information should be read in light of the factors described under the section entitled "Cautionary Statement Regarding Forward-Looking Statements" beginning on page 94.

Opinion of Jaguar Financial Advisor

Jaguar engaged Stifel to act as its financial advisor in connection with Jaguar's analysis of a merger, acquisition, joint venture, minority investment or other similar transaction with Napo. On March 28, 2017, Stifel delivered to the Jaguar Board an oral opinion, subsequently confirmed in writing by delivery of a written opinion dated March 28, 2017 (the "Opinion"), that, as of that date and based upon and subject to the various limitations, matters, qualifications and assumptions set forth therein, the Transaction Consideration (as defined below) to be issued by Jaguar in the Transaction (as defined below) was fair to Jaguar, from a financial point of view.

For purposes of its analyses and Opinion, Stifel was advised by Jaguar's management that, pursuant to the Merger Agreement and certain related agreements, Jaguar will acquire all of the issued and outstanding equity interests of Napo, and certain debt and liabilities of Napo will be restructured, in the merger and certain related transactions (collectively, and as described more fully in the Opinion, the "Transaction"), and that the number of shares of Jaguar common stock and Jaguar non-voting common stock to be issued or potentially issued by Jaguar in the Transaction, including, without limitation, shares issuable upon conversion of convertible notes and upon any exercise of or otherwise pursuant to Jaguar warrants, RSUs and options issued in the Transaction, will total, in the aggregate, 69,299,346 shares of Jaguar common stock and Jaguar non-voting common stock (such number of shares, the "Transaction Consideration").

Jaguar did not impose any limitations on Stifel with respect to the investigations made or procedures followed in rendering its Opinion. In selecting Stifel, Jaguar's Board considered, among other things, the fact that Stifel is a reputable investment banking firm with substantial experience advising companies in the healthcare and biopharmaceutical sectors and in providing strategic advisory services in general. Stifel, as part of its investment banking business, is regularly engaged in the

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independent valuation of businesses and securities in connection with mergers, acquisitions, underwritings, sales and distributions of listed and unlisted securities, private placements and valuations for estate, corporate and other purposes. In the ordinary course of business, Stifel and its clients may transact in the equity securities of each of Jaguar and Napo and may at any time hold a long or short position in such securities.

The full text of the written Opinion that Stifel delivered to the Jaguar Board is attached to this registration statement as *Annex C* and is incorporated into this document by reference. The summary of Stifel's Opinion set forth in this registration statement is qualified in its entirety by reference to the full text of the Opinion. Jaguar stockholders are urged to read the Opinion carefully and in its entirety for a discussion of the assumptions made, procedures followed, matters considered and limits of the review undertaken by Stifel in connection with such Opinion.

Stifel's Opinion was for the information of, and directed to the Jaguar Board for its information and assistance in connection with its consideration of the financial terms of the Transaction. Stifel's Opinion did not constitute a recommendation to the Jaguar Board as to how the Jaguar Board should vote or otherwise act with respect to the Transaction or any other matter, or to any stockholder of Jaguar or Napo as to how any such stockholder should vote or act with respect to the Transaction or any other matter, including whether or not any stockholder of Jaguar or Napo should exercise any dissenters', appraisal or similar rights that may be available to such stockholder. In addition, Stifel's Opinion did not compare the relative merits of the Transaction with any other alternative transactions or business strategies which may have been available to Jaguar and did not address the underlying business decision of the Jaguar Board or Jaguar to proceed with or effect the Transaction.

In connection with its Opinion, Stifel, among other things:

- reviewed the financial terms contained in a draft received on March 28, 2017 of the merger agreement;
- reviewed certain publicly available information and data concerning Jaguar, including audited consolidated financial statements of Jaguar contained in its Annual Reports on Form 10-K for the three years ended December 31, 2016 and certain relevant historical financial and operating data concerning Jaguar furnished to Stifel by the management of Jaguar;
- reviewed certain non-publicly available financial analyses, financial projections, reports and other information concerning Jaguar furnished to Stifel by the management of Jaguar, including projections for Jaguar reflecting the probability of technical success determined by the management of Jaguar (the "Jaguar Projections"), and utilized per instruction of Jaguar;
- reviewed certain publicly available information and data concerning Napo and certain non-publicly available information and data concerning Napo furnished to Stifel by the management of Jaguar, including audited consolidated financial statements of Napo for the year ended December 31, 2016, and certain financial analyses, financial projections, reports and other information concerning Napo furnished to Stifel by the management of Jaguar, including projections for Napo reflecting the probability of technical success determined by the management of Jaguar (the "Napo Projections"), and utilized per instruction of Jaguar;
- reviewed pro-forma projections for Jaguar and Napo giving effect to the Transaction and reflecting the probabilities of technical success determined by the management of Jaguar (the "Pro Forma Projections"), provided by the management of Jaguar;
- reviewed a pro forma balance sheet of Jaguar and Napo giving effect to the Transaction (the "Pro Forma Balance Sheet"), provided by the management of Jaguar;

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discussed with the management of Jaguar the historical and current business operations, financial condition and prospects of each of Jaguar and Napo and such other matters as Stifel deemed relevant;

held discussions with the management of Jaguar regarding the potential effects of the Transaction, including the pro forma financial impact of the Merger on Jaguar and Napo;

reviewed and analyzed certain operating results and projections of each of Jaguar and Napo as compared to operating results, projections, reported prices and trading histories of certain publicly traded companies that Stifel deemed relevant;

reviewed and analyzed certain financial terms of the Transaction as compared to the publicly available financial terms of certain selected merger and acquisition transactions that Stifel deemed relevant to its analysis;

reviewed and analyzed, based on the Jaguar Projections, the cash flows generated by Jaguar on a stand-alone basis to determine the present value of the discounted cash flows;

reviewed and analyzed, based on the Napo Projections, the cash flows generated by Napo on a stand-alone basis to determine the present value of the discounted cash flows; and

reviewed and analyzed such other information and such other factors, and conducted such other financial studies, analyses and investigations, as Stifel deemed relevant for the purposes of our opinion. In addition, Stifel took into account its assessment of general economic, market and financial conditions and its experience in other transactions, as well as its experience in securities valuations and its general knowledge of the industry in which both Jaguar and Napo operate.

In rendering its Opinion, Stifel, with the Jaguar Board's consent, relied upon and assumed, without independent verification, the accuracy and completeness of all of the financial and other information that was provided to Stifel by or on behalf of Jaguar, or that was otherwise reviewed by Stifel, and Stifel did not assume any responsibility for independently verifying any of such information. With respect to the financial forecasts and projections supplied to Stifel by Jaguar (including, without limitation, the Jaguar Projections, the Napo Projections and the Pro Forma Projections), Stifel assumed, at the direction of Jaguar, that they were reasonably prepared on the basis reflecting the best currently available estimates and judgments of the management of Jaguar as to the future operating and financial performance of Jaguar and Napo, as applicable, and that they provided a reasonable basis upon which Stifel could form its Opinion. Such forecasts and projections were not prepared with the expectation of public disclosure. All such forecasts and projections were based on numerous variables and assumptions that are inherently uncertain, including, without limitation, factors related to general economic and competitive conditions. Accordingly, actual results could vary significantly from those set forth in such forecasts and projections. Stifel relied on these forecasts and projections without independent verification or analysis and did not in any respect assume any responsibility for the accuracy or completeness thereof. Stifel expressed no opinion as to the Jaguar Projections, the Napo Projections, the Pro Forma Projections or any other estimates, forecasts or projections or the assumptions on which they were made. With respect to the Pro Forma Balance Sheet, Stifel assumed, at the direction of Jaguar, that it accurately reflected the pro forma combined balance sheet of Jaguar and Napo immediately after the closing of the Transaction. Stifel assumed, at the direction of Jaguar, that the Transaction Consideration consists of 69,299,346 shares, in the aggregate, of Jaguar common stock and Jaguar non-voting common stock (including, without limitation, shares of Jaguar common stock and Jaguar non-voting common stock issuable in respect of contingent rights and upon conversion of convertible notes), that any portion of the Transaction Consideration attributable to convertible notes will be converted into Jaguar common stock at or immediately following the closing date of the merger. Stifel further assumed, at the direction of Jaguar, that each share of Jaguar non-voting common stock has the same value as a share of Jaguar common stock.

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Stifel also assumed that there were no material changes in the assets, liabilities, financial condition, results of operations, business or prospects of either Jaguar or Napo since the date of the last financial statements of Jaguar and Napo made available to Stifel. Stifel did not make or obtain any independent evaluation, appraisal or physical inspection of either Jaguar's or Napo's assets or liabilities (contingent or otherwise), nor had Stifel been furnished with any such evaluation or appraisal. Estimates of values of companies and assets do not purport to be appraisals or necessarily reflect the prices at which companies or assets may actually be sold. Because such estimates are inherently subject to uncertainty, Stifel assumed no responsibility for their accuracy.

Stifel assumed, with the Jaguar Board's consent, that there were no factors that would delay or subject to any adverse conditions any necessary regulatory or governmental approvals, consents, releases and waivers and that all conditions to the Transaction would be satisfied and not waived. In addition, Stifel assumed that the definitive Merger Agreement would not differ materially from the draft Stifel reviewed. Stifel also assumed that the Transaction would be consummated substantially on the terms and conditions described in the merger agreement and by the management of Jaguar, without any waiver or modification of any material term or condition by Jaguar or any other party and without any adjustment to the Transaction Consideration, and that obtaining any necessary regulatory or other approvals, consents, releases and waivers or satisfying any other conditions for consummation of the Transaction would not have an adverse effect on Jaguar, Napo or the Transaction. Stifel also assumed, in all respects material to its Opinion, that the representations and warranties of Jaguar, Napo and other parties contained in the Merger Agreement are true and correct and that all such parties would comply with each of their covenants in the Merger Agreement. Stifel assumed that the Transaction would be consummated in a manner that complies with the applicable provisions of the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, and all other applicable federal, state and foreign statutes, rules and regulations. Stifel further assumed that Jaguar has relied upon the advice of its counsel, independent accountants and other advisors (other than Stifel) as to all legal, financial reporting, tax, accounting and regulatory matters with respect to Jaguar, Napo, the Transaction, and the merger agreement.

Stifel's Opinion was limited to whether, as of the date of the Opinion, the Transaction Consideration to be issued by Jaguar in the Transaction was fair to Jaguar, from a financial point of view, and did not address any other terms, aspects or implications of the Transaction, including, without limitation, the form or structure of the Merger or any other part of the Transaction, any individual transaction or group of transactions, or the terms, conditions or any other aspect of any individual transaction or group of transactions, that is or are part of the Transaction, any consequences of the Transaction on Jaguar, its stockholders, creditors or otherwise, or any terms, aspects or implications of any voting, support, stockholder or other agreements, arrangements or understandings contemplated or entered into in connection with the Transaction or otherwise, including without limitation any terms or conditions of any of the agreements relating to the issuance or potential issuance of shares included in the Transaction Consideration. Stifel's Opinion also did not consider, address or include: (i) any other strategic alternatives currently (or which have been or may be) contemplated by the Board or Jaguar; (ii) the legal, financial reporting, tax, accounting or regulatory consequences of the Transaction on Jaguar or the holders of Jaguar common stock; (iii) the fairness of the amount or nature of any compensation to any of Jaguar's officers, directors or employees, or class of such persons, relative to the compensation to the holders of Jaguar's securities or otherwise; or (iv) the effect of the Transaction on, or the fairness of the consideration to be received by, holders of any class of securities of Jaguar, or any class of securities of any other party to the Transaction. Furthermore, Stifel did not express any opinion as to the prices, trading range or volume at which Jaguar's securities will trade following public announcement or consummation of the Transaction.

Stifel's Opinion was necessarily based on economic, market, financial and other conditions as they existed on, and on the information made available to Stifel by or on behalf of Jaguar or its advisors, or

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information otherwise reviewed by Stifel, as of the date of its Opinion. It is understood that subsequent developments may affect the conclusion reached in its Opinion and that Stifel does not have any obligation to update, revise or reaffirm its Opinion. Stifel's Opinion is not a solvency opinion and does not in any way address the solvency or financial condition of Jaguar or Napo. Stifel's Opinion was approved by its fairness committee.

In accordance with customary investment banking practice, Stifel employed generally accepted valuation methods and financial analyses in reaching its Opinion. The following is a brief summary of the material financial analyses performed by Stifel in arriving at its Opinion. These summaries of financial analyses alone do not constitute a complete description of the financial analyses Stifel employed in reaching its conclusions. None of the analyses performed by Stifel were assigned a greater significance by Stifel than any other, nor does the order of analyses described represent relative importance or weight given to those analyses by Stifel. The financial analyses summarized below include information presented in tabular format. In order to fully understand the financial analyses used by Stifel, the tables must be read together with the text of each summary. The tables alone do not constitute a complete description of the financial analyses. The summary text describing each financial analysis does not constitute a complete description of Stifel's financial analyses, including the methodologies and assumptions underlying the analyses, and if viewed in isolation could create a misleading or incomplete view of the financial analyses performed by Stifel. The summary text set forth below does not represent and should not be viewed by anyone as constituting conclusions reached by Stifel with respect to any of the analyses performed by it in connection with its Opinion. Rather, Stifel made its determination as to the fairness, from a financial point of view, to Jaguar of the Transaction Consideration to be issued in the Transaction pursuant to the merger agreement on the basis of its experience and professional judgment after considering the results of all of the analyses performed.

Except as otherwise noted, the information utilized by Stifel in its analyses, to the extent based on market data, was based on market data as it existed on or before March 27, 2017 and is not necessarily indicative of current market conditions. The analyses described below do not purport to be indicative of actual future results, or to reflect the prices at which any securities may trade in the public markets, which may vary depending upon various factors, including changes in interest rates, dividend rates, market conditions, economic conditions and other factors that influence the price of securities.

Stifel was informed by Jaguar management that the number of shares of Jaguar common stock and Jaguar non-voting common stock comprising the Transaction Consideration (including those shares potentially issuable pursuant to options and warrants) would (i) be equal to 3.00 times the number of Jaguar shares outstanding or potentially issuable (including those shares potentially issuable pursuant to all outstanding warrants, RSUs and options for Jaguar common stock, excluding 50% of such options and warrants with exercise or conversion prices of $5.00 or more), and (ii) accordingly represent 75% of the sum of the number of shares of Jaguar common stock and non-voting common stock comprising the Transaction Consideration plus the number of Jaguar shares outstanding or potentially issuable, in each case as described above.

Based on a treasury stock dilution calculation, taking into consideration the strike or exercise prices of the Jaguar dilutive securities to be issued in connection with the Transaction and the strike or exercise prices of the outstanding Jaguar dilutive securities, as provided by Jaguar management, and the closing price of Jaguar common stock on March 27, 2017, Stifel calculated that the number of diluted shares comprising the Transaction Consideration (including those shares potentially issuable pursuant to options and warrants) would (i) be equal to 4.44 times the number of diluted Jaguar shares and (ii) accordingly represent 82% of the sum of the number of shares of Jaguar common stock and non-voting common stock comprising the Transaction Consideration plus the number of diluted Jaguar shares, in each case calculated as described above.

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Stifel conducted an analysis of the ratios of the pre-Transaction stand-alone equity value of Napo relative to the pre-Transaction stand-alone equity value of Jaguar, in each case as implied by valuation analyses conducted by Stifel and described below. In conducting its analysis, Stifel used three primary methodologies: selected publicly traded companies analysis; selected precedent transactions analysis; and discounted cash flow (referred to as DCF) analysis. Each of these valuation analyses yielded a range of implied equity values for Jaguar and Napo, respectively, which Stifel then used to calculate a range of ratios (referred to as implied ownership ratios) based on comparing: (i) the low value of the range of implied equity values of Jaguar with the high value of the range of implied equity values of Napo and; (ii) the high value of the range of implied equity values of Jaguar with the low value of the range of implied equity values of Napo. In addition, Stifel also performed a relative contribution margin analysis to assess the relative annual contributions from both Jaguar and Napo to projected revenues, net income and unlevered free cash flow.

Selected Publicly Traded Companies Analysis.

Napo:

Stifel reviewed certain publicly available financial information for the following four publicly traded development- and commercial-stage biotechnology companies with market capitalizations of less than $1 billion, and whose lead asset(s) were in the gastrointestinal medicine space:

Selected Gastrointestinal Focused Biotechnology Companies

Ardelyx

Heron Therapeutics

RedHill Biopharma

Sucampo Pharmaceuticals

These companies were selected by Stifel, among other reasons, because they may be considered similar in some respects, for purposes of these analyses, to Napo, based on the industry in which the companies operate as described above. Stifel established an upper limit of $1 billion on the market capitalization of the selected publicly traded companies based on a review of certain operating metrics of Napo including margin profile, profitability, scale, and revenue trajectory among others.

For each of the selected companies, Stifel calculated a multiple of enterprise value (calculated as equity value based on closing stock prices on March 27, 2016, plus total debt less cash and equivalents) ("EV") to estimated calendar year 2018 and 2019 revenues ("EV/Revenue"), as obtained from publicly available sources. The mean and median EV/Revenue multiples calculated for the selected companies are shown in the table below:

Selected Gastrointestinal Focused Biotechnology Companies		
	EV/Revenue	
	2018	**2019**
Mean	8.55x	2.82x
Median	9.58x	2.74x

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Based on its analysis of the selected companies, Stifel selected the following range of 2018 and 2019 EV/Revenue multiples:

Selected Range of 2018 and 2019 EV/Revenue Multiples

	EV/Revenue	
	Low	**High**
2018 EV/Revenue	8.50x	9.50x
2019 EV/Revenue	2.50x	3.00x

Based on the selected ranges of EV/Revenue multiples, Stifel calculated an implied range of equity values of Napo by (i) multiplying the low and high values of the selected range of 2018 and 2019 EV/Revenue multiples by Napo's estimated, probability adjusted calendar year 2018 and 2019 revenues, as contained in the Napo Projections, in order to determine the corresponding enterprise value; and (ii) adding Napo net cash, which Stifel defined as cash and cash equivalents less debt, preferred stock and minority interests, as of March 1, 2017 and as provided by Jaguar management, to get to an implied equity value for Napo (the "2018 Napo EV/Revenue Analysis" and the "2019 Napo EV/Revenue Analysis," respectively). For purposes of this and its other analyses, Where applicable, all in-the-money convertible debt, which Stifel defines as any convertible note with a conversion price less than or equal to the closing price of Jaguar common stock on March 27, 2017, was treated on an as-converted basis. This analysis resulted in the following ranges of implied equity values for Napo:

Implied Equity Values for Napo

	Implied Equity Value ($MM)	
	Low	**High**
2018 Napo EV/Revenue Analysis	$ 399	$ 446
2019 Napo EV/Revenue Analysis	$ 143	$ 172

Jaguar:

Stifel reviewed certain publicly available financial information for the following four publicly traded development- and commercial-stage biotechnology companies with market capitalizations of less than $300 million and whose lead asset(s) were in the animal health space:

Selected Animal Health Companies

Aratana Therapeutics

ImmuCell Corporation

Kindred Biosciences

Nexvet Biopharma

These companies were selected by Stifel, among other reasons, because they may be considered similar in some respects, for purposes of these analyses, to Jaguar, based on the industry in which the companies operate as described above. Stifel established an upper limit of $300 million on the market capitalization of the selected publicly traded companies based on a review of certain operating metrics of Jaguar including margin profile, profitability, scale, and revenue trajectory among others.

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For each of the selected companies, Stifel calculated multiple of enterprise value to estimated calendar year 2018 and 2019 revenues, as obtained from publicly available sources. The mean and median EV/Revenue multiples calculated for the selected companies are shown in the table below:

Selected Animal Health Companies

	EV/Revenue	
	2018	**2019**
Mean	6.46x	1.84x
Median	5.96x	1.70x

Based on its analysis of the selected companies, Stifel selected the following range of 2018 and 2019 EV/Revenue multiples:

Selected Range of 2018 and 2019 EV/Revenue Multiples

	EV/Revenue	
	Low	**High**
2018 EV/Revenue	6.00x	6.50x
2019 EV/Revenue	1.50x	2.00x

Based on the selected ranges of EV/Revenue multiples, Stifel calculated an implied range of equity values of Jaguar by (i) multiplying the low and high values of the selected range of 2018 and 2019 EV/Revenue multiples by Jaguar's estimated, probability adjusted calendar year 2018 and 2019 revenues, as contained in the Jaguar Projections, in order to determine the corresponding enterprise value; and (ii) adding Jaguar net cash, as of March 1, 2017 and as provided by Jaguar management, to get to an implied equity value for Jaguar (the "2018 Jaguar EV/Revenue Analysis" and the "2019 Jaguar EV/Revenue Analysis," respectively). This analysis resulted in the following ranges of implied equity values for Jaguar:

Implied Equity Values for Jaguar

	Implied Equity Value ($MM)	
	Low	**High**
2018 Jaguar EV/Revenue Analysis	$ 76	$ 82
2019 Jaguar EV/Revenue Analysis	$ 29	$ 39

Relative:

Based on these analyses, Stifel then compared (i) the low value of the 2018 Jaguar EV/Revenue Analysis to the high value of the 2018 Napo EV/Revenue Analysis and the high value of the 2018 Jaguar EV/Revenue Analysis to the low value of the 2018 Napo EV/Revenue Analysis; and (ii) the low value of the 2019 Jaguar EV/Revenue Analysis to the high value of the 2019 Napo EV/Revenue Analysis and the high value of the 2019 Jaguar EV/Revenue Analysis to the low value of the 2019 Napo EV/Revenue Analysis. Each of these analyses yielded a range of implied ownership ratios between Jaguar and Napo, as set forth in the following table:

Implied Ownership Ratios

	Low	**High**
2018 Relative EV/Revenue Analysis	4.87x	5.91x
2019 Relative EV/Revenue Analysis	3.66x	5.93x

Stifel selected the companies on the basis of various factors, including the size of the companies, the current phase of the companies' life cycles and the similarity of the lines of business, although, as noted above, no company used in this analysis is identical to either Jaguar or Napo. Accordingly, these

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analyses are not purely mathematical, but also involve complex considerations and judgments concerning the differences in financial and operating characteristics of the selected companies and other factors.

Selected Precedent Transactions Analysis.

Napo:

Stifel reviewed certain publicly available information for the following four selected business combinations of biotechnology companies, announced subsequent to January 1, 2003, involving targets focused on gastrointestinal medicine with implied equity values of greater than $100 million and less than $1.5 billion at the time of announcement of the transaction:

Selected Gastrointestinal Focused Precedent Transactions

Date	Target	Acquiror	Equity Value ($MM)	Enterprise Value ($MM)
08/03/10	Movetis	Shire	$ 600.2	$ 468.9
11/29/07	Axcan Pharma	TPG Capital	$ 1,347.7	$ 1,038.7
06/23/05	InKine Pharmaceuticals	Salix Pharmaceuticals	$ 173.4	$ 162.8
04/10/03	Salix Pharmaceuticals	Axcan Pharma	$ 189.9	$ 134.1

These transactions were selected by Stifel, among other reasons, because the target companies may be considered similar in some respects, for purposes of these analyses, to Napo, based on the industry in which the companies operate as described above. Stifel established a range of implied equity values of the target companies between $100 million to $1.5 billion based on a review of certain operating metrics of Napo including margin profile, profitability, scale, and revenue trajectory among others.

For each of the selected transactions, Stifel calculated a multiple of enterprise value to revenue for the last twelve months ("LTM") prior to the date of announcement of selected transaction, as obtained from publicly available sources ("EV/LTM Revenue"). The mean and median EV/LTM Revenue multiples calculated for the selected companies are shown in the table below:

Selected Gastrointestinal Focused Precedent Transactions

	EV/LTM Revenue
Mean	4.64x
Median	4.01x

Based on its analysis of the selected transactions, Stifel selected the following range of EV/LTM Revenue multiples:

Selected Range of EV/LTM Revenue Multiples

	Low	High
EV/LTM Revenue Multiples	4.00x	4.75x

Based on the selected ranges of EV/LTM Revenue multiples, Stifel calculated a range of implied equity values of Napo by (i) multiplying the low and high values of the selected range of EV/LTM Revenue multiples by each of Napo's estimated, probability adjusted calendar year 2018, 2019 and 2020 revenues, as contained in the Napo Projections, and then discounting these values to present values using a discount rate of 21.0% (which is the midpoint of the discount rate used in the Napo discounted cash flow analysis, as described below), in order to determine the corresponding enterprise value; and (ii) adding Napo net cash, as of March 1, 2017 and as provided by Jaguar management (the "2018 Napo EV/LTM Revenue Analysis," the "2019 Napo EV/LTM Revenue Analysis" and the "2020 Napo

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EV/LTM Revenue Analysis," respectively). This analysis resulted in the following ranges of implied equity values for Napo:

Implied Equity Values for Napo

	Implied Equity Value ($MM)	
	Low	High
2018 Napo EV/LTM Revenue Analysis	$ 127	$ 151
2019 Napo EV/LTM Revenue Analysis	$ 129	$ 154
2020 Napo EV/LTM Revenue Analysis	$ 359	$ 427

Jaguar:

Stifel reviewed certain publicly available information for the following nine selected business combinations of animal health companies, announced subsequent to January 1, 2010, involving targets in the animal health sector with implied equity values of less than $500 million at the time of announcement of the transaction:

Selected Animal Health Precedent Transactions

Date	Target	Acquiror	Equity Value ($MM)	Enterprise Value ($MM)
09/16/16	Apex Laboratories	Dechra Pharmaceuticals	$ 41.3	$ 41.3
03/15/16	Putney	Dechra Pharmaceuticals	$ 200.0	$ 200.0
08/03/15	GENERA	Dechra Pharmaceuticals	$ 27.8	$ 40.9
11/17/14	Abbott Animal Health Assets	Zoetis	$ 255.0	$ 255.0
03/30/13	PHARMAQ	Permira	$ 321.0	$ 321.0
09/14/12	Teva Animal Health	Bayer	$ 60.0	$ 60.0
04/05/12	Eurovet Animal Health	Dechra Pharmaceuticals	$ 177.1	$ 186.2
01/07/11	Bomac	Bayer	$ 95.2	$ 95.2
10/22/10	DermaPet Inc.	Dechra Pharmaceuticals	$ 42.0	$ 42.0

These transactions were selected by Stifel, among other reasons, because the target companies may be considered similar in some respects, for purposes of these analyses, to Jaguar, based on the industry in which the companies operate as described above. Stifel established an upper limit of $500 million on the implied equity values of the target companies based on a review of certain operating metrics of Jaguar including margin profile, profitability, scale, and revenue trajectory among others.

For each of the selected transactions, Stifel calculated a multiple of enterprise value to LTM revenue, as obtained from publicly available sources. The mean and median EV/LTM Revenue multiples calculated for the selected companies are shown in the table below:

Selected Animal Health Precedent Transactions

	EV/LTM Revenue
Mean	3.06x
Median	3.84x

Based on its analysis of the selected transactions, Stifel selected the following range of EV/LTM Revenue multiples:

Selected Range of EV/LTM Revenue Multiples

	Low	High
EV/LTM Revenue Multiples	3.00x	3.75x

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Based on the selected ranges of EV/LTM Revenue multiples, Stifel calculated a range of implied equity values of Jaguar by (i) multiplying the low and high values of the selected range of EV/LTM Revenue multiples by each of Jaguar's estimated, probability adjusted calendar year 2018, 2019 and 2020 revenues, as contained in the Jaguar Projections, and then discounting these values to present values using a discount rate of 19.0% (which is the midpoint of the discount rate used in the Jaguar discounted cash flow analysis, see below), in order to determine the corresponding enterprise value; and (ii) adding Jaguar net cash, as of March 1, 2017 and as provided by Jaguar management, to get to an implied equity value for Jaguar (the "2018 Jaguar EV/LTM Revenue Analysis," the "2019 Jaguar EV/LTM Revenue Analysis" and the "2020 Jaguar EV/LTM Revenue Analysis," respectively). This analysis resulted in the following ranges of implied equity values for Jaguar:

Implied Equity Values for Jaguar

	Implied Equity Value ($MM)	
	Low	**High**
2018 Jaguar EV/LTM Revenue Analysis	$ 26	$ 33
2019 Jaguar EV/LTM Revenue Analysis	$ 35	$ 44
2020 Jaguar EV/LTM Revenue Analysis	$ 45	$ 56

Relative:

Based on these analyses, Stifel then compared (i) the low value of the 2018 Jaguar EV/LTM Revenue Analysis to the high value of the 2018 Napo EV/LTM Revenue Analysis and the high value of the 2018 Jaguar EV/LTM Revenue Analysis to the low value of the 2018 Napo EV/LTM Revenue Analysis; (ii) the low value of the 2019 Jaguar EV/LTM Revenue Analysis to the high value of the 2019 Napo EV/LTM Revenue Analysis and the high value of the 2019 Jaguar EV/LTM Revenue Analysis to the low value of the 2019 Napo EV/LTM Revenue Analysis; and (iii) the low value of the 2020 Jaguar EV/LTM Revenue Analysis to the high value of the 2020 Napo EV/LTM Revenue Analysis and the high value of the 2020 Jaguar EV/LTM Revenue Analysis to the low value of the 2020 Napo EV/LTM Revenue Analysis. Each of these analyses yielded a range of implied ownership ratios between Jaguar and Napo, as set forth in the following table:

Implied Ownership Ratios

	Low	**High**
2018 Relative EV/LTM Revenue Analysis	3.90x	5.85x
2019 Relative EV/LTM Revenue Analysis	2.96x	4.43x
2020 Relative EV/LTM Revenue Analysis	6.42x	9.59x

Stifel selected the business combination transactions on the basis of various factors, including the size of the target company, the current phase of the companies' life cycles and the similarity of the lines of business, as of the time of the announcement of the transaction, although, as noted above, no transaction used in this analysis is identical to the Transaction. Accordingly, these analyses are not purely mathematical, but also involve complex considerations and judgments concerning the differences in financial and operating characteristics associated with each of the transactions and other factors.

Discounted Cash Flow Analysis.

Napo:

Stifel used the Napo Projections, as provided by Jaguar management to perform a discounted cash flow analysis. Stifel calculated the terminal value of the projected unlevered free cash flow by applying a range of perpetuity growth rates of 1% to 3%, as specified by Jaguar management, to Napo's projected calendar year 2026 free cash flow. Stifel then discounted these cash flows to present values

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using discount rates of 18.5% - 23.5%, based on Napo's weighted average cost of capital, considering Napo's company-specific circumstances and Stifel's business and industry knowledge. This analysis yielded a range of enterprise values to which Stifel then added Napo net cash, as of March 1, 2017, to get to an implied equity value for Napo (the "Napo DCF Analysis"). This analysis resulted in the following range of implied equity values for Napo:

Implied Equity Values for Napo ($MM)

	Low	High
Napo DCF Analysis	$ 153	$ 304

Jaguar:

Stifel used the Jaguar Projections, as provided by Jaguar management, to perform a discounted cash flow analysis. Stifel calculated the terminal value of the projected unlevered free cash flow by applying a range of perpetuity growth rates of 1% to 3%, as specified by Jaguar management, to Jaguar's projected calendar year 2026 free cash flow. Stifel then discounted these cash flows to present values using discount ranges from 16.5% - 21.5%, based on Jaguar's weighted average cost of capital, considering Jaguar's company-specific circumstances and Stifel's business and industry knowledge. This analysis yielded a range of enterprise values to which Stifel then added Jaguar net cash, as of March 1, 2017, to get to an implied equity value for Jaguar (the "Jaguar DCF Analysis"). This analysis resulted in the following range of implied equity values for Jaguar:

Implied Equity Values for Jaguar ($MM)

	Low	High
Jaguar DCF Analysis	$ 48	$ 96

Relative:

Based on these analyses, Stifel then compared the low value of the Jaguar DCF Analysis to the high value of the Napo DCF Analysis and the high value of the Jaguar DCF Analysis to the low value of the Napo DCF Analysis. This analysis yielded a range of implied ownership ratios between Jaguar and Napo, as set forth in the following table:

Implied Ownership Ratios

	Low	High
Relative DCF Analysis	1.60x	6.30x

Contribution Margin Analysis.

In this analysis, Stifel used the Jaguar Projections and the Napo Projections, each as provided by Jaguar management, to assess the relative annual contributions from both Jaguar and Napo to

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the: (i) revenue; (ii) net income; and (iii) unlevered free cash flow, without certain pro-forma adjustments. This analysis resulted in the following contribution margins for Jaguar and Napo:

	For The Year Ending December 31,									
	2017E	**2018E**	**2019E**	**2020E**	**2021E**	**2022E**	**2023E**	**2024E**	**2025E**	**2026E**
Revenue										
Jaguar	41%	21%	26%	14%	13%	17%	12%	10%	12%	9%
Napo	59%	79%	74%	86%	87%	83%	88%	90%	88%	91%
Net Income										
Jaguar	NM	NM	NM	25%	38%	45%	24%	18%	23%	15%
Napo	NM	NM	NM	75%	62%	55%	76%	82%	77%	85%
Unlevered Free Cash Flow										
Jaguar	NM	NM	NM	NM	NM	60%	33%	20%	21%	17%
Napo	NM	NM	NM	NM	NM	40%	67%	80%	79%	83%

Miscellaneous

No individual methodology was given a specific weight, nor should any methodology be viewed individually. Additionally, no company or transaction used in any analysis as a comparison is identical to Jaguar or the Transaction, and they all differ in material ways. Accordingly, an analysis of the results described below is not mathematical; rather it involves complex considerations and judgments concerning differences in financial and operating characteristics of the companies and other factors that could affect the public trading value of the selected companies or transactions to which they are being compared.

The preparation of a fairness opinion is a complex process and is not necessarily susceptible to a partial analysis or summary description. In arriving at its Opinion, Stifel considered the results of all of its analyses as a whole and did not attribute any particular weight to any analysis or factor considered by it. Stifel believes that the summary provided and the analyses described above must be considered as a whole and that selecting portions of these analyses, without considering all of them, would create an incomplete view of the process underlying Stifel's analyses and Opinion; therefore, the ranges of valuations and relative valuations resulting from any particular analysis described above should not be taken to be Stifel's view of the actual valuation of either Jaguar or Napo or their relative valuation.

Stifel is acting as financial advisor to Jaguar in connection with the Merger. Jaguar agreed to pay Stifel a fee of $1,000,000 for its services, $750,000 of which was earned upon delivery of its Opinion and is payable upon the earlier of consummation of the Merger and the date 90 days following the date of Stifel's Opinion, and the remaining portion of which is contingent upon the completion of the Merger. In addition, Jaguar has agreed to reimburse Stifel for its expenses incurred in connection with Stifel's engagement and to indemnify Stifel and its affiliates and their respective officers, directors, employees and agents, and any persons controlling Stifel or any of its affiliates, against specified liabilities. In the ordinary course of business Stifel and its clients may transaction in the equity securities of each of Jaguar and Napo and may at any time hold a long or short position in such securities. Stifel may seek to provide investment banking or financial advisory services to Jaguar or its affiliates in the future, for which Stifel would seek customary compensation.

Jaguar and Napo Unaudited Prospective Financial Information

Neither Jaguar nor Napo make public long-term projections as to future revenues, earnings or other results due to, among other reasons, the uncertainty of the underlying assumptions and estimates. However, in connection with Jaguar's and Napo's evaluation of the transaction, Jaguar and Napo made available to each other certain unaudited prospective financial information relating to the other party

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on a stand-alone, pre-transaction basis, all of which was provided to Jaguar's financial advisor. The unaudited prospective financial information was not prepared with a view toward public disclosure and the inclusion of this information should not be regarded as an indication that any of Jaguar, Napo or any other recipient of this information considered, or now considers, it to be necessarily predictive of actual future results.

The unaudited prospective financial information was, in general, prepared solely for internal use and is subjective in many respects and thus subject to interpretation. While presented with numeric specificity, the unaudited prospective financial information reflects numerous estimates and assumptions, including risk adjustments, made by the management of each party to the Merger with respect to industry performance and competition, general business, economic, market and financial conditions and matters specific to such party's business, all of which are difficult to predict and many of which are beyond such party's control. In particular, the unaudited prospective financial information assumed, among other things, that the then-current macro-economic outlook would remain constant; that each party's revenue growth over the period covered would exceed market growth rates; that each party's strategic growth plan, in particular in regulatory approval of products for new markets, would be successfully executed; that gross margins would improve, driven by favorable product mix with improvements in economies of scale and reduction in production costs; and that a reduction in selling, general and administrative expenses as a percentage of sales would be achieved. Many of these assumptions are subject to change, including among other factors, clinical trial results and regulatory approval out of the companies' control, and the unaudited prospective financial information does not reflect revised prospects for either party's business, changes in general business or economic conditions or any other transaction or event that has occurred or that may occur and that was not anticipated at the time such financial information was prepared. As a result, there can be no assurance that the results reflected in the unaudited prospective financial information will be realized or that actual results will not materially vary from this unaudited prospective financial information. In addition, since the unaudited prospective financial information covers multiple years, such information by its nature becomes less predictive with each successive year. Therefore, the inclusion of the unaudited prospective financial information in this joint proxy statement/prospectus should not be relied on as necessarily predictive of actual future events nor construed as financial guidance. Jaguar and Napo's stockholders are urged to review Jaguar's risk factors with respect to Jaguar's business located elsewhere in this joint proxy statement/prospectus.

The unaudited prospective financial information was not prepared with a view toward complying with the published guidelines of the SEC regarding projections or the guidelines established by the American Institute of Certified Public Accountants for preparation and presentation of prospective financial information, but, in the view of each party's management, was prepared on a reasonable basis, reflects the best available estimates and judgments at the time of preparation, and presents, to the best of management's knowledge and belief at the time of preparation, the expected course of action and the expected future risk adjusted financial performance of each such party. Neither party's independent registered public accounting firm, nor any other independent accountants, have compiled, examined, or performed any procedures with respect to the unaudited prospective financial information contained herein (including the unaudited prospective financial information presented below), nor have they expressed any opinion or any other form of assurance on such information or the achievability of the results reflected in such information, and assume no responsibility for, and disclaim any association with, the unaudited prospective financial information. Accordingly, neither party's independent registered public accounting firm, nor any other independent accountants, provide any form of assurance with respect thereto for the purpose of this joint proxy statement/prospectus.

Readers of this joint proxy statement/prospectus are cautioned not to unduly rely on the unaudited prospective financial information. Some or all of the assumptions which have been made regarding, among other things, the timing or probability of certain occurrences or impacts, may have changed

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since the date such information was prepared. Neither party has updated nor intends to update or otherwise revise the unaudited prospective financial information to reflect circumstances existing after the date when such information was prepared or to reflect the occurrence of future events, except to the extent required by applicable law. Neither party has made any representation to the other or any other person involved with the Merger or otherwise concerning the unaudited prospective financial information.

The unaudited prospective financial information set forth below does not give effect to the transaction.

Jaguar Income Statement Projections (US$ in millions)

	For The Calendar Year Ended December 31,									
	2017E	**2018E**	**2019E**	**2020E**	**2021E**	**2022E**	**2023E**	**2024E**	**2025E**	**2026E**
Revenue										
EGUS		$ 3.3	$ 7.7	$ 20.5	$ 28.7	$ 38.4	$ 47.8	$ 51.8	$ 53.6	$ 53.6
Plus: Non-RX (Neonorm)	2.3	3.0	3.5	4.6	6.0	7.3	8.3	10.6	13.0	15.8
Plus: License/Royalty (Canalevia)	0.1	4.5	9.0	2.5	6.8	10.3	14.4	17.9	21.3	24.1
Plus: Canalevia Milestones/Reimbursement	3.2	2.0		3.0		25.0			30.0	
Total Revenue	$ 5.6	$ 12.8	$ 20.2	$ 30.6	$ 41.5	$ 81.0	$ 70.5	$ 80.3	$ 117.9	$ 93.5
COGS	(0.5)	(1.6)	(2.0)	(5.2)	(7.2)	(9.5)	(11.8)	(13.1)	(13.9)	(14.5)
Gross Profit	$ 5.1	$ 11.2	$ 18.2	$ 25.4	$ 34.3	$ 71.4	$ 58.7	$ 67.3	$ 103.9	$ 78.9
G&A	(8.0)	(7.9)	(8.3)	(8.7)	(9.1)	(5.7)	(4.9)	(5.6)	(8.3)	(6.5)
S&M	(0.8)	(1.0)	(1.9)	(4.1)	(5.7)	(7.7)	(9.6)	(10.4)	(10.7)	(10.7)
R&D	(3.8)	(6.9)	(5.0)	(5.0)	(5.0)	(5.0)	(5.0)	(5.3)	(5.5)	(5.8)
Operating Income	$ (7.5)	$ (4.6)	$ 3.0	$ 7.6	$ 14.4	$ 53.1	$ 39.2	$ 46.0	$ 79.5	$ 55.9
Interest Expense	(0.3)	(0.6)								
Pretax Income	$ (7.8)	$ (5.2)	$ 3.0	$ 7.6	$ 14.4	$ 53.1	$ 39.2	$ 46.0	$ 79.5	$ 55.9
Less: Taxes			(1.2)	(3.1)	(5.8)	(21.2)	(15.7)	(18.4)	(31.8)	(22.4)
Net Income	$ (7.8)	$ (5.2)	$ 1.8	$ 4.6	$ 8.7	$ 31.9	$ 23.5	$ 27.6	$ 47.7	$ 33.5
Operating Income	$ (7.5)	$ (4.6)	$ 3.0	$ 7.6	$ 14.4	$ 53.1	$ 39.2	$ 46.0	$ 79.5	$ 55.9
Plus: Depreciation & Amortization										
EBITDA	$ (7.5)	$ (4.6)	$ 3.0	$ 7.6	$ 14.4	$ 53.1	$ 39.2	$ 46.0	$ 79.5	$ 55.9

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Napo Income Statement Projections (US$ in millions)

	For The Calendar Year Ended December 31,									
	2017E	**2018E**	**2019E**	**2020E**	**2021E**	**2022E**	**2023E**	**2024E**	**2025E**	**2026E**
Revenue										
Mytesi	$ 10.0	$ 21.4	$ 34.9	$ 53.4	$ 76.7	$ 87.0	$ 92.4	$ 93.3	$ 94.3	$ 94.3
Less: Gross to Net (GTN)	(2.0)	(4.3)	(7.0)	(10.7)	(15.3)	(17.4)	(18.5)	(18.7)	(18.9)	(18.9)
Net Mytesi	$ 8.0	$ 17.1	$ 27.9	$ 42.7	$ 61.4	$ 69.6	$ 74.0	$ 74.7	$ 75.4	$ 75.4
Plus: Pediatric (PEDS)							12.2	21.1	57.7	72.6
Plus: Irritable Bowel Syndrome (IBS)				79.0	148.4	241.1	305.8	375.7	392.3	409.6
Plus: IBS transfer payment				11.6	21.5	34.7	43.5	53.5	55.8	58.3
Plus: Chemo Induced Diarrhea (CID)					12.2	23.2	38.1	48.9	60.7	64.1
Plus: CID transfer payment					3.6	6.7	10.9	13.9	17.3	18.2
Plus: C. difficile						10.7	33.5	63.3	111.1	181.9
Plus: Royalties		0.0	0.1	0.1	0.1	6.3	12.9	44.2	67.7	93.4
Plus: Milestones		30.0	30.0	60.0	40.0					
Total Revenue	$ 8.0	$ 47.1	$ 58.0	$ 193.3	$ 287.2	$ 392.3	$ 530.9	$ 695.2	$ 838.1	$ 973.5
COGS	$ (3.8)	$ (8.4)	$ (12.4)	$ (54.8)	$ (98.7)	$ (154.5)	$ (205.2)	$ (260.6)	$ (310.8)	$ (354.4)
Gross Profit	$ 4.2	$ 38.7	$ 45.6	$ 138.5	$ 188.5	$ 237.9	$ 325.7	$ 434.6	$ 527.3	$ 619.0
G&A	$ (2.6)	$ (3.1)	$ (3.9)	$ (15.0)	$ (32.9)	$ (47.5)	$ (62.0)	$ (79.7)	$ (97.2)	$ (110.0)
S&M	$ (2.9)	$ (6.7)	$ (40.4)	$ (74.2)	$ (94.6)	$ (107.5)	$ (123.3)	$ (134.0)	$ (148.2)	$ (164.1)
R&D	$ (2.3)	$ (11.5)	$ (17.3)	$ (21.2)	$ (31.4)	$ (11.7)	$ (11.7)	$ (11.3)	$ (11.4)	$ (11.4)
Operating Income	$ (3.7)	$ 17.4	$ (16.0)	$ 28.1	$ 29.6	$ 71.2	$ 128.6	$ 209.5	$ 270.6	$ 333.5
Less: Equipment Line Interest			$ (3.1)	$ (5.4)	$ (5.9)	$ (6.2)	$ (6.5)	$ (6.8)	$ (6.9)	$ (5.6)
Less: PIK Note Interest	(1.3)	(1.3)	(1.3)							
Pretax Income	$ (4.9)	$ 16.1	$ (20.3)	$ 22.7	$ 23.8	$ 65.0	$ 122.1	$ 202.8	$ 263.6	$ 327.9
Less: Taxes				(9.1)	(9.5)	(26.0)	(48.9)	(81.1)	(105.5)	(131.2)
Net Income	$ (4.9)	$ 16.1	$ (20.3)	$ 13.6	$ 14.3	$ 39.0	$ 73.3	$ 121.7	$ 158.2	$ 196.8
Operating Income	$ (3.7)	$ 17.4	$ (16.0)	$ 28.1	$ 29.6	$ 71.2	$ 128.6	$ 209.5	$ 270.6	$ 333.5
Plus: Depreciation/Amortization				5.1	6.6	8.1	9.5	11.0	12.5	12.5
EBITDA	$ (3.7)	$ 17.4	$ (16.0)	$ 33.2	$ 36.2	$ 79.3	$ 138.2	$ 220.5	$ 283.0	$ 346.0

Accounting Treatment

The acquisition of Napo common stock by Jaguar in the merger will be accounted for under the acquisition method of accounting according to United States generally accepted accounting principles. This means that the assets and liabilities of Napo will be recorded, as of the completion of the merger, at their fair values and consolidated with those of Jaguar. This will result in recording an amount for goodwill, which represents the excess of the purchase price over the fair value of the identifiable net assets of Napo. Financial statements of Jaguar issued after the merger will reflect only the operations of Napo's business after the merger and will not be restated retroactively to reflect the historical financial position or results of operations of Napo.

All unaudited pro forma combined condensed financial information contained in this joint proxy statement/prospectus was prepared using the acquisition method of accounting for business combinations. The final allocation of the purchase price will be determined after the merger is completed and after completion of an analysis to determine the fair value of the assets and liabilities of Napo's business. Accordingly, the final purchase accounting adjustments may be materially different from the unaudited pro forma adjustments. Any decrease in the fair value of the assets or increase in the fair value of the liabilities of Napo's business as compared to the unaudited pro forma combined condensed financial information included in this joint proxy statement/prospectus will have the effect of increasing the amount of recorded goodwill. An increase or decrease in the share price of Jaguar would have the effect of increasing or decreasing goodwill, as the case may be. The goodwill amount will

not be affected by a change in the Napo share price.

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Material United States Federal Income Tax Consequences of the Merger

The following is a discussion of material U.S. federal income tax consequences of the merger applicable to U.S. Holders (as defined below) who in the merger exchange their shares of Napo common stock for the contingent right, assuming the merger is consummated as contemplated herein. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. 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 pronouncement of the Internal Revenue Service ("IRS"), each as in effect on the date of this joint proxy statement/prospectus, and all of which are subject to change, possibly with retroactive effect.

This discussion is limited to U.S. Holders that hold their shares of Napo common stock as capital assets (as defined in Section 1221 of the Code) for United States federal income tax purposes. This discussion does not address (i) the Medicare contribution tax on net investment income or the alternative minimum tax, (ii) the 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, transactions effectuated pursuant to the Settlement Agreement, the Investor Rights Agreement and other agreements in which shares of Jaguar common stock or Jaguar convertible notes will be issued to certain purchasers or investors, as applicable, and (iii) the tax consequences to holders of options, warrants or similar rights to purchase Napo common stock.

This discussion does not address all of the U.S. federal income tax consequences that may be relevant to a particular Napo stockholder or Napo stockholders that are subject to special treatment under United States federal income tax laws including, but not limited to, non-U.S. persons or entities, financial institutions, tax-exempt organizations, persons who hold their shares of Napo common stock through individual retirement accounts or other tax-deferred accounts, insurance companies, regulated investment companies, partnerships or other pass-through entities, broker-dealers, traders in securities who elect the mark-to-market method of accounting for their securities, Napo stockholders who hold their shares as part of a "straddle," "hedge," "conversion transaction" or other integrated transaction, Napo stockholders who acquired their shares of Napo common stock pursuant to the exercise of employee stock options or otherwise in connection with the performance of services, United States expatriates, Napo stockholders who have a functional currency other than the United States dollar, Napo stockholders liable for the alternative minimum tax and Napo stockholders who exercise their appraisal rights.

For purposes of this discussion, a "U.S. Holder" is a beneficial owner of Napo 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 in or 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 taxation regardless of its source; or
- a trust that either (i) is subject to the primary supervision of a court within the United States and one or more United States persons (within the meaning of Section 770l(a)(3) of the Code) has or have the authority to control all substantial decisions of such trust, or (ii) 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 a partnership (or other entity treated as a partnership for U.S. federal income tax purposes) holds shares of Jaguar common stock, the U.S. federal income tax treatment of a partner in the

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partnership generally will depend on the status of the partner and the activities of the partnership. A partner in a partnership holding shares of Jaguar common stock should consult its tax advisors with respect to the tax consequences of the merger.

No ruling has been or will be requested from the IRS with respect to the tax consequences of the merger. As a result, there can be no assurance that the IRS will not assert, or that a court would not sustain, a position contrary to any of the following conclusions.

Napo stockholders are urged to consult their tax advisors as to the particular United States federal income tax consequences of the transaction to them, as well as any tax consequences arising under any state, local and non-United States tax laws or any other United States federal tax laws.

Tax Consequences to Napo Stockholders

Exchange of Napo Common Stock for Contingent Right to Receive Jaguar Stock. The merger will not qualify as a tax-free reorganization within the meaning of Section 368 of the Internal Revenue Code of 1986, as amended (sometimes referred to as the Code). Although it is not free from doubt, a Napo Stockholder should not recognize any taxable gain or loss until such Napo Stockholder's Certificate Delivery Date. The term "Certificate Delivery Date" means, with respect to each Napo Stockholder, the date on which such Napo Stockholder delivers to the Exchange Agent his, her or its Napo stock certificate(s) for cancellation, together with a letter of transmittal duly executed and completed in accordance with its terms and such other documents and/or payments of withholding taxes as may be reasonably required by the Exchange Agent or Jaguar. At that time, such Napo Stockholder will recognize gain or loss from the sale of his, her or its shares of Napo common stock in an amount equal to the difference between (i) the fair market value of a Merger Share on such Napo Stockholder's Certificate Delivery Date multiplied by the number of Merger Shares received by such Napo Stockholder (sometimes referred to as the Purchase Price) and (ii) such Napo Stockholder's tax basis in his, her or its shares of Napo common stock surrendered in the merger. Any such capital gain or capital loss will constitute long-term capital gain or loss if the Napo Stockholder's holding period for his, her or its shares of Napo common stock is more than one year as of the effective date of the merger. Under current law, long-term capital gains of non-corporate taxpayers are taxed at a reduced U.S. federal income tax rate. Under current law, the deductibility of capital losses is subject to limitations.

If, on the Final Determination Date, there has been a Final Determination that no shares of Jaguar common stock will be issued to the Napo Stockholders, each Napo Stockholder will recognize a capital loss in an amount equal to such Napo Stockholder's tax basis in his, her or its shares of Napo common stock surrendered in the merger. See discussion above regarding the holding period required for the loss to constitute a long-term capital loss and the limitations on the deductibility of capital losses.

In addition, a portion of the Purchase Price received by each Napo Stockholder will constitute imputed interest that will be taxed at ordinary rates pursuant to Section 483 of the Code. The imputed interest rules of Section 483 apply regardless of whether a Napo Stockholder recognizes a capital gain or loss on the merger. However, if a Napo Stockholder recognizes capital gain on the merger, the amount of such capital gain will be reduced dollar-for-dollar by the amount of the Napo Stockholder's imputed interest, and if a Napo Stockholder recognizes a capital loss on the merger, the amount of such capital loss will be increased dollar-for-dollar by the amount of the Napo Stockholder's imputed interest. If no shares of Jaguar common stock are issued to the Napo Stockholders, Section 483 will not apply and the Napo Stockholders will not have any imputed interest.

Tax Basis in, and Holding Period for, Jaguar Common Stock. A Napo Stockholder's aggregate tax basis in the shares of Jaguar common stock, if any, received by such Napo Stockholder pursuant to the merger should be equal to the fair market value of such shares of Jaguar common stock on the

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Certificate Delivery Date. The holding period of shares of Jaguar common stock received by a Napo Stockholder pursuant to the merger should begin on the Certificate Delivery Date.

Information reporting and backup withholding

In general, information reporting will apply to any dividends paid with respect to shares of Jaguar common stock and any proceeds from the sale, exchange or other disposition, through a broker, of shares of Jaguar common stock that are paid to a U.S. Holder, unless the U.S. Holder is an exempt recipient and appropriately establishes that exemption. Backup withholding may apply to such payments unless a U.S. Holder (i) provides Jaguar with a correct taxpayer identification number and certifies that it is not subject to backup withholding on Form W-9 or a substantially similar form, or (ii) otherwise proves to Jaguar and its exchange agent that it is exempt from backup withholding. The current backup withholding rate is 28%. If a U.S. Holder does not provide a correct taxpayer identification number on IRS Form W-9 or other proper certification, the stockholder may be subject to penalties imposed by the IRS.

Backup withholding is not an additional tax and any amounts withheld under the backup withholding rules generally will be allowed as a refund or credit against a U.S. Holder's U.S. federal income tax liability provided the U.S. Holder timely furnishes the required information to the IRS. In the event of backup withholding, a U.S. Holder should consult his, her or its tax advisor to determine whether such U.S. Holder is entitled to any tax credit, tax refund or other tax benefit as a result of such backup withholding.

The tax consequences of the transaction to a particular Napo stockholder will depend on the stockholder's individual circumstances. Napo stockholders are strongly encouraged to consult their tax advisors regarding the specific tax consequences of the transaction to them, including tax return reporting requirements and the applicability of federal, state, local and non-United States tax laws.

Appraisal Rights

Jaguar stockholders are not entitled to appraisal rights in connection with the merger. See "Information About the Jaguar Special Meeting and Vote Appraisal Rights; Trading of Shares" beginning on page 227 for more detail.

Under Delaware law, Napo stockholders have appraisal rights in connection with the merger. Therefore, a stockholder of Napo may elect to be paid cash for the fair value of such stockholder's shares as determined by the Delaware Court of Chancery and in accordance with the procedures set forth in Section 262. See "Information About the Napo Special Meeting and Vote Appraisal Rights" beginning on page 259 for more detail.

Regulatory Matters Relating to the Merger

Neither Jaguar nor Napo is required to make any filings or to obtain approvals or clearances from any antitrust regulatory authorities in the United States or other countries to complete the merger. In the United States, Jaguar must comply with applicable federal and state securities laws and the rules and regulations of The NASDAQ Stock Market LLC in connection with the issuance of shares of Jaguar's common stock in the merger, including the filing with the SEC of this joint proxy statement/prospectus. The merger agreement provides that Napo and Jaguar shall obtain all necessary actions or nonactions, waivers, consents and approvals from governmental entities or other persons necessary in connection with the consummation of the merger and the other transactions contemplated by the merger agreement and take all reasonable steps as may be necessary to obtain an approval or waiver from, or to avoid any action or proceeding by, any governmental entity or other persons necessary in connection with the consummation of the merger and the other transactions contemplated by the merger agreement.

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Napo RSUs, Napo Options and Napo Warrants

At the effective time of the merger, each outstanding Napo RSU, option and warrant, whether or not vested, to receive Napo stock that is outstanding immediately prior to the effective time of the merger will be converted into an RSU, option or warrant to receive Jaguar common stock.

Each RSU to acquire Napo common stock will be converted automatically at the effective time of the merger into an RSU to acquire Jaguar common stock, which will be governed by the terms of the Jaguar 2014 Stock Plan. Under the merger agreement, certain holders of Napo RSUs will agree to become "RSU Indemnitors" with respect to the Jaguar RSUs to be issued to them pursuant to the merger, and to be bound by the indemnification obligations of RSU Indemnitors set forth in the merger agreement with respect to such Jaguar RSUs. In the event that a Parent Indemnitee (as such term is defined in the merger agreement) is entitled to indemnification, each RSU Indemnitor shall promptly pay to the Parent Indemnitees his or her pro rata share of the indemnification amount determined in accordance with the merger agreement, either in cash or, at the sole election of the RSU Indemnitor, forfeiture of an equivalent dollar amount of Jaguar RSUs held by the RSU Indemnitor. To the extent Tranche B Shares are delivered to Nantucket as a result of Nantucket not achieving the applicable Hurdle Amount from the sale of Tranche A Shares, the RSU Indemnitors will forfeit to the holders of contingent rights a portion of the fixed number of shares issuable under their Jaguar RSUs.

Each option to acquire Napo common stock will be converted automatically at the effective time of the merger into an option to acquire Jaguar common stock, which will be governed by the terms of the Jaguar 2014 Stock Plan. The number of shares of Jaguar common stock subject to each outstanding Napo option assumed by Jaguar will be determined by multiplying the number of shares of Napo common stock that were subject to such option, as applicable, by 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger) and rounding the resulting number down to the nearest whole number of shares of Jaguar common stock. The per share exercise price for the Jaguar common stock issuable upon exercise of each Napo option or warrant assumed by Jaguar will be determined by dividing the per share exercise price of Napo common stock subject to such option or warrant, as applicable, by 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger) and rounding the resulting exercise price up to the nearest whole cent. Any restriction on the exercise of any Napo option will continue in full force and effect and the term, exercisability, vesting schedule and other provisions of such Napo option will remain unchanged.

Each warrant to acquire Napo common stock will be converted automatically at the effective time of the merger into a warrant to acquire Jaguar common stock. The number of shares of Jaguar common stock subject to each outstanding Napo warrant assumed by Jaguar will be determined by multiplying the number of shares of Napo common stock that were subject to such warrant, as applicable, by 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger) and rounding the resulting number down to the nearest whole number of shares of Jaguar common stock. The per share exercise price for the Jaguar common stock issuable upon exercise of each Napo warrant assumed by Jaguar will be determined by dividing the per share exercise price of Napo common stock subject to such warrant, as applicable, by 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger) and rounding the resulting exercise price up to the nearest whole cent. Any restriction on the exercise of any Napo warrant will continue in full force and effect.

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Stock Exchange Listing; Shares to be Issued in the Merger

It is a condition to the merger that the shares of Jaguar common stock issuable pursuant to the merger be approved for listing on The NASDAQ Capital Market, subject to official notice of issuance. In addition, if the merger results in a "change of control" under NASDAQ Marketplace Rule 5635(b), Jaguar will be required to submit a new original listing application with NASDAQ and comply with the NASDAQ Capital Market initial listing requirements.

Shares of Jaguar common stock will continue to be traded on The NASDAQ Capital Market under the symbol "JAGX" immediately following the completion of the merger. Shares of Jaguar non-voting common stock will not be listed for trading on any securities exchange, including The NASDAQ Capital Market.

A total of an aggregate of approximately 69,299,346 shares of Jaguar common stock and non-voting common stock will be issued upon the closing of the transactions contemplated by the merger agreement and the related Napo debt settlement, which will represent approximately 75% of the total Jaguar common stock and non-voting common stock issued and outstanding immediately following the merger.

After the merger, Jaguar stockholders will continue to own their existing shares of Jaguar common stock. Accordingly, Jaguar stockholders will hold the same number of shares of Jaguar common stock that they held immediately prior to the merger. However, because Jaguar will be issuing new shares of Jaguar common stock and non-voting common stock to Napo creditors, contingent rights to receive Jaguar common stock to Napo stockholders, and options, warrants and restricted stock units exercisable for Jaguar common stock to holders of Napo options, warrants and restricted stock units in the merger, the stockholders of Jaguar will experience dilution as a result of the issuance of shares in the transactions contemplated by the merger agreement and each outstanding share of Jaguar common stock immediately prior to the merger will represent a smaller percentage of the total number of shares of Jaguar common stock and non-voting common stock issued and outstanding after the merger. It is expected that Jaguar stockholders before the merger will hold approximately 25% of the total Jaguar common stock and non-voting common stock issued and outstanding immediately following completion of the merger, on a fully diluted basis of Jaguar as of March 31, 2017 assuming the exercise or conversion of all outstanding options and warrants other than those options and warrants exercisable or convertible for approximately 300,000 shares of Jaguar common stock with an exercise/conversion price of $5.00 or more. Thus, Jaguar stockholders before the merger will experience dilution in the amount of approximately 75% as a result of the merger.

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ADDITIONAL INTERESTS OF CERTAIN OF JAGUAR AND NAPO'S DIRECTORS AND EXECUTIVE OFFICERS IN THE MERGER

Interests of the Jaguar Directors and Executive Officers in the Merger

In considering the recommendation of Jaguar's board of directors with respect to issuing shares of Jaguar common stock as contemplated by the merger agreement and the other matters to be acted upon by Jaguar stockholders at the Jaguar special meeting, Jaguar stockholders should be aware that certain members of the board of directors and executive officers of Jaguar have interests in the merger that may be different from, or in addition to, the interests of Jaguar stockholders. These interests relate to or arise from the matters described below. The board of directors of Jaguar was aware of these potential conflicts of interest and considered them, among other matters, in reaching their respective decisions to approve the merger agreement and the merger, and to recommend that the Jaguar stockholders approve the Jaguar proposals to be presented to the Jaguar stockholders for consideration at the Jaguar special meeting as contemplated by this proxy statement/prospectus.

The named executive officers are not entitled any compensation that is based on or otherwise relates to the merger or any pension or non-qualified deferred compensation benefits enhancements or any tax reimbursements in connection with the merger.

2017 Exchangeable Notes

If issuance of shares of Jaguar common stock in exchange for the 2017 Exchangeable Note is not approved by Jaguar stockholders at the special meeting, or if the merger agreement is terminated prior to completion of the merger, the outstanding balance due under the Note will not be converted into Jaguar common stock and the Note will remain outstanding. Moreover, because conversion of the outstanding balance of the Note into shares of Jaguar common stock is a closing condition of the merger agreement, success of the merger is also dependent upon stockholder approval of conversion of the Note.

Ownership Interests

As of December 31, 2016, Jaguar's Chief Executive Officer and President, Lisa A. Conte, owned or controlled 2.5% of the outstanding shares of Jaguar common stock. Ms. Conte is also the interim Chief Executive Officer of Napo.

Indemnification and Insurance for the Jaguar Officers and Directors

Upon the effective date of the merger and for a period that for six years after the effective time of the merger, Jaguar will cause the surviving corporation to honor all rights to indemnification for acts or omissions prior to the effective time of the merger existing in favor of Jaguar and Napo directors or officers as provided in Napo's organizational documents. The merger agreement also provides that, from and after the effective time of the merger, Jaguar will provide exculpation, indemnification and advancement expenses for each former director, officer, employee or agent of Napo to cover actions at or prior to the effective time of the merger, including all transactions contemplated by the merger agreement, which is at least as favorable in scope and amount as the exculpation, indemnification and advancement of expenses provided to such former director, officer, employee or agent of Napo prior to the effective time of the merger.

Interests of the Napo Directors and Executive Officers in the Merger

In considering the recommendation of Napo's board of directors with respect to adopting the merger agreement, Napo stockholders should be aware that certain members of the board of directors and executive officers of Napo have interests in the merger that may be different from, or in addition

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to, the interests of Napo stockholders. These interests relate to or arise from the matters described below. The board of directors of Napo was aware of these potential conflicts of interest and considered them, among other matters, in reaching their respective decisions to approve the merger agreement and the merger, and to recommend, that the Napo stockholders approve the Napo proposals to be presented to the Napo stockholders for consideration at the Napo special meeting as contemplated by this proxy statement/prospectus.

The named executive officers are not entitled any compensation that is based on or otherwise relates to the merger or any pension or non-qualified deferred compensation benefits enhancements or any tax reimbursements in connection with the merger.

Ownership Interests

Some of Napo's directors and executive officers currently hold shares of Napo's common stock. The table below sets forth the anticipated ownership of Napo's common stock by Napo's directors and executive officers immediately prior to the closing of the merger based on their ownership of Napo's capital stock as of December 31, 2016.

Stockholder Name	Number of Shares of Napo Common Stock Immediately Prior to the Closing of the Merger
Lisa A. Conte(1)	1,394,380
Richard W. Fields(2)	
Joshua Mailman(3)	5,135,674
Gregory Stock(4)	386,273
Charles Thompson(5)	137,000

(1) Lisa A. Conte is Napo's interim chief executive officer. She is also the chief executive officer and president of Jaguar.

(2) Mr. Fields is a member of Napo's board of directors.

(3) Mr. Mailman is a member of Napo's board of directors.

(4) Mr. Stock is a member of Napo's board of directors.

(5) Mr. Thompson is Napo's chief financial officer.

Stock Options

Napo's directors and Napo's executive officers hold options to purchase shares of Napo common stock, all of which are vested and which, pursuant to the merger agreement, will be converted into and become options to purchase shares of Jaguar common stock. In connection with the conversion of the options, the number of shares subject to the options and the option exercise prices will be adjusted pursuant to the terms of the merger agreement. The number of shares subject to each option will be multiplied by 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger), rounding any resulting fractional shares down to the nearest whole share, and the exercise price of each option will be divided by 0.182071326 (subject to adjustment for various contingencies, such as any financing transaction by either Jaguar or Napo that is consummated during the period between the execution of the merger agreement and the consummation of the merger), rounding up to the nearest whole cent. The option terms will remain the

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same, including any vesting terms. The table below sets forth certain information with respect to the options.